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LONDON LANCET

A JOURNAL OF

BRITISH AND FOREIGN MEDICAL,

SURGICAL, AND CHEMICAL SCIENCE,

CRITICISM, LITERATURE AND NEWS.

HALF-YEARLY VOLUMES.

VOLUME II.—1860.

EDITED BY

THOMAS WAKLEY, SURGEON, J. HENRY BENNETT, M.D., AND T. WAKLEY, Jr., M.R.S.C.E.

New York:
1860.

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THE LANCET.

Journal of Medical, Surgical and Chemical Science and Practice, Criticism, Literature and News.

MR. WAKLEY, M.P. EDITOR. J. HENRY BENNET, M.D., J. WAKLEY, Jr. SUB-EDITORS.

IN TWO VOLUMES ANNUALLY.

Vol. 2. NEW YORK, JULY, 1860. No. 1.

ON THE IMPORTANCE OF THE STUDY OF MIDWIFERY.

BEING AN

Introductory Lecture

Delivered at St. Mary's Hospital Medical School, May 1st, 1860.

By Graily Hewitt, M.D., M.R.C.P.,

Lecturer on Midwifery and Diseases of Women and Children at St. Mary's Hospital, and Physician to the British Lying-in Hospital.

Gentlemen,—It is the object and intention of the course of study about to be commenced by these Lectures to prepare and fit you for undertaking the responsibilities of obstetric practice.

Before beginning the study of any subject, it is always well for us to possess correct ideas both as to its nature and importance, and as to the practical usefulness of a knowledge of that subject; there is otherwise a danger of our falling into one of two extremes, and of devoting to its acquirement either an inadequate or an unnecessary share of the time or powers at our disposal.

At the outset, then, it is necessary that I should say a few words in reference to the degree of importance which you, as students endeavoring to qualify yourselves for the duties of medical practitioners, ought to attach to the study of the particular subjects to be considered in this course of lectures—namely, Midwifery, and the Diseases of Women and Children; and the more so, as it is not at all improbable that many of you may entertain notions on this point very much at variance with the real facts of the case. It is not my purpose to underrate the importance to you, as future practitioners, of a knowledge of subjects taught in other courses of lectures, and I should be very sorry to be the means of inducing you to neglect any one of them. But it is undeniably the fact, that, as a rule, medical students pay far too little attention to the study of midwifery and the allied subjects, the diseases of women and children; and for this reason it is right that you should, before it is too late, be made aware of the necessities of the case, and of the actual state of matters in reference to this question.

Now, important as it is that you should be acquainted with medicine proper, and important as it is that you should be acquainted with surgery, the two other great departments of medical practice, you may depend upon it that, in order to become a successful practitioner, your knowledge of medicine or surgery, however perfect, must be supplemented with a thorough and practical acquaintance with the subjects to be taught in this course of lectures. And why is this? You will find in entering on practice, that your time will be chiefly occupied in duties which will require for their proper fulfilment a thorough knowledge of midwifery and the allied subjects. The diseases, or morbid conditions, to which your attention has been, perhaps, most directed as students, and concerning which the extent of your information may be the greatest possible, will, comparatively speaking, rarely come under your notice. Cases of pneumonia, calling for an elaborate diagnosis; cases in which the operation of lithotomy is required to be performed, do not every day present themselves to a beginner in practice; but the first thing you are called upon to do on leaving the scene of your studies may be to attend a woman in labour; the second, perhaps, to inform the mother how to feed or manage the rearing of her infant. In dealing with these every day matters your conduct will be open to much criticism on the part of non-professional observers, and the reasoning adopted by such critics, often, it must be remarked, very discerning in reference to the ability of a practitioner in this department of medicine, will naturally be that ignorance of one thing implies ignorance of another. You will be judged, not by that which you do, but by that which you do *not* know. On the other hand, aptitude and dexterity shown by you, under such circumstances, are as readily appreciated, and will go a long way towards obtaining for you that without which you cannot practise with any degree of success—viz., the confidence of your patients.

The duties involved in attendance in the lying-in room are not, as is too commonly supposed, to be got through without much previous study. Nor must it be supposed, because parturition is, in a degree, a natural process, that little assistance or interference can be required. It is undoubtedly true that in the large majority of cases of labour the result is favorable—Nature accomplishes her work easily and well; but it is also true that there are exceptions to this general rule, and I need hardly add that these exceptional cases occur when they are least expected. Now and then the obstetric practitioner is placed under circumstances which try his resources, judgment, and skill to the utmost; which are alarming even to one well acquainted with his duties, but which unnerve and render powerless a more ignorant individual. The reflections of a man who has found himself wanting under such circumstances, and through whose lack of knowledge and skill the valued life of the mother of a family, it may be that of his own wife or sister, has been lost, are not to be envied. The practice of midwifery is peculiar in this respect, that its emergencies often come suddenly upon us and at a moment's notice. Our decision must be frequently made at once, and action must follow the decision without delay, or it will be of no avail to the patient. In many cases, as in the country, where distances are great and the population scattered, the friendly aid of a brother practitioner cannot be obtained. In other cases of danger or difficulty the delay of an hour or two, involved in obtaining such assistance, may be of no material consequence as regards the issue of the case; but in midwifery practice a very trifling delay in the application of the necessary succor may be fatal to the patient. Need I say, that to be prepared for such emergencies is a matter of bounden duty with everyone who proposes to himself to undertake the practice of this department of the profession?

Your chief and paramount duty as medical practitioners is to save life; by every means in your power to advance this the grand aim of our noble profession. As obstetric practitioners, the exercise of this duty will every day come before you in some shape or other; for parturition is a process dangerous not only to the mother, but in a still greater degree dangerous to the child. We find, on referring to the past history of obstetric practice for information on this point, that formerly the mortality amongst lying-in women was very large. Women in the hands of ignorant midwives were often suffered to remain in labour for days, and to perish for want of assistance; or if the mother was saved, it was at the expense of the child. The first great improvement in obstetric practice was due to Ambrose Paré, who in the sixteenth century introduced, or rather re-introduced, the operation of turning in certain difficult cases of labour, for we find mention of this expedient in the works of Hippocrates. The next great step was the invention by our countryman, Chamberlen, of the forceps; and the next, also a very important one, the induction of premature labour. Previously to the invention of the forceps, to which midwifery owes so much, infants were sacrificed whenever the least difficulty occurred; the crotchet was regularly called into requisition when a labour had lasted a certain time. In the last century, Mittelhäuser, a practitioner in Germany, boasted that he only lost two out of every ten children delivered. We learn from the pages of La Motte what the practice was in France at the same period. The midwife and the crotchet were inseparable companions.

In reviewing the past and present mortality in obstetric practice, Dr. Tyler Smith says—"The average deaths from childbirth in London during the ten years between 1660 and 1670, as nearly as could be ascertained by Dr. Merriman from the Bills of Mortality, was 1 in 39. At the present time the average of deaths from childbirth and puerperal disease in this metropolis is rather less than 1 in 200, so that two centuries ago more than five women were lost in childbed where one now perishes."* Although there is great matter for congratulation in this, there is much yet to be done to render *general* obstetric practice what it should be. The average maternal mortality in England and Wales, stated by Dr. Tyler Smith to be about 1 in 180, is far above what is met with in the practice of good accoucheurs. Thus Mr. Bailey, of Thetford, the results of whose fifty years' practice of midwifery are recorded in the volume now before me, and from which I have just quoted, states that in 6476 labours only 6 women died from labour causes, or about 1 in 1000.

From these facts you may judge that a practitioner of midwifery, who knows his business well, will be the humble means of saving more lives than his more ignorant and Providence-trusting neighbor. Do not suppose, therefore, that there is nothing for you to do, and no difficulties to be surmounted. You will find in the emergencies of this department of practice many opportunities for the exercise of your skill, if you have it, and many occasions on which you will bitterly regret its absence if you have it not.

This necessary knowledge and skill are to be acquired only by a careful study of the various subjects to be brought before you in this course of lectures, and by diligently attending cases of labour. With reference to the necessary attendance on cases of labour, the subject appears to call for a few remarks. It must be confessed that to many students of midwifery the often-protracted and apparently useless attendance in the lying-in chamber which they are at first called upon to render is, and not unnaturally so, somewhat distasteful. It is unquestionably the fact, that in attending your first few cases of labour the exercise of a little self-denial may be found necessary. But there is, as you must well know, no "royal road" to the acquirement of knowledge which is of any value, and the patience and self-denial will not be uselessly expended if you take advantage of the opportunities there presented for mastering your subject and becoming familiar with the normal process of parturition. Unless by patient observation this elementry kind of knowledge has been acquired, you will never be in a position to practise midwifery with any satisfaction, and you will never attain to any degree of skill, because it will be impossible to have any confidence in your own powers. Too many practitioners pass through their lives as mere routinists, so far as the practice of midwifery is concerned. If Nature be tedious in her operations, they are compelled to look on helpless and incapable of assisting her in her work; the ignorance and incompetence which are the natural results of an early neglect of their duties naturally produce in such individuals dislike for this department of their profession, and their practice therein is necessarily either timorous and uncertain, or rash and ill-judging. It will be easy to avoid the disasters and inconveniences attending such a mode of practice if you only determine early enough to do what you can to avoid them.

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* On the Abolition of Craniotomy from Obstetric Practice, &c. Obstetrical Transactions, vol. I, p. 39.

The importance of the study of midwifery is now only beginning to be recognised by the profession as it deserves. The spirit which, within a comparatively recent period, led an individual of mark and eminence in the profession to characterize midwifery as "an unfit occupation for gentlemen of an academical education" has not entirely disappeared; the different examining boards have not yet, through the medium of their regulations, placed the subject of midwifery before the eyes of students and practitioners in the position relatively to medicine and surgery which it ought to occupy. This and other deficiencies will doubtless be remedied in time; the prejudices of individuals must give way to the cause of the interests of humanity; and there is every probability that in future this department of the profession will assume a position and an importance in public opinion to which it has never yet attained. The increasing estimation of the value of "life;" and the growing sense of the duty and necessity for its preservation under all circumstances, must have the effect of giving a high position to an art which in skillful hands is capable of doing so much in the way of saving life. It is your duty, as well as your interest, to take care that so far as you are concerned the public respect for the obstetric art and the practitioners of that art be not diminished.

Health of the Army.—Sanitarium in China.—The *China Chronicle* and the *Daily Press* of Hong Kong are at loggerheads as to the eligibility of "the Peak" near Hong Kong as a sanitary station. This site has been fixed upon by the authorities. The *China Chronicle* contends that no one "could fancy a more unwholesome, insalubrious, or, in fact, ineligible situation in every point of view."

LECTURES ON FEVERS:

BEING

The Lumleian Lectures,

DELIVERED BEFORE THE

ROYAL COLLEGE OF PHYSICIANS OF LONDON, 1858–59;

COMPRISING

A DESCRIPTION OF THE DISTINCTIVE CHARACTERS, PATHOLOGY, AND TREATMENT

OF

THE SEVERAL FORMS

OF

CONTINUED FEVER.

BY

ALEXANDER TWEEDIE, M.D., F.R.S.,

Fellow of the Royal College of Physicians, Physician to the London Fever Hospital, to the Foundling Hospital, Examiner in Medicine in the University of London,
etc. etc.

LECTURE VIII.

TYPHUS FEVER—(*Continued.*)

Progress and duration—crisis and critical days—anatomical lesions—the brain—pharynx and larynx—pulmonary organs—the heart—absence of lesions in the alimentary canal—splenic lesions—summary—changes in the blood—diagnosis—infantile diseases liable to be mistaken for fever.

The *progress and duration* of typhus fever, when uncomplicated, are influenced by various circumstances.

Its duration is considerably shorter than that of enteric fever, and when it proves fatal, death takes place, in general, at an earlier period of the disease. If we trace the amendment, or *turn*, as it is called in popular language, it will be found that this takes place between the tenth and sixteenth day, but the average duration may be assumed to be fourteen or fifteen days. In mild cases it is short; in the more severe, protracted, seldom, however, exceeding twenty-one days. It will be found, too, by comparing its duration at different ages, that it is shorter in young persons—that is, under the age of puberty—than in adults.

These remarks apply, of course, to simple or uncomplicated typhus, for when intercurrent affections spring up, its duration cannot be defined.

The approach of convalescence is indicated by a gradual decline in the more characteristic symptoms. The delirium, often one of the most prominent, first disappears, and the patient recovers, in some degree, the knowledge which had, for a time, been lost. The memory, however, though much improved, is evidently defective; hence the difficulty in recalling to mind circumstances that had occurred before and during the fever. At the same time, there is a gradual disappearance of the indifference noticed in the patient during the disease; surrounding objects attract attention, and the moral feelings begin to be awakened.

With this improvement in the nervous system, the muscular powers are strengthened; the pulse becomes calm, regular, and open, though frequently weaker than in health: the heat, perspiration, and thirst disappear: the appetite improves, and the nights are passed in comfortable refreshing sleep.

Doctrine of crisis and critical days.—It has been a very common opinion from early times, that in fevers, the decline or disappearance of the symptoms is accompanied or preceded by a *crisis* (a term implying *separation from the body.*) This doctrine, however, cannot be applied to enteric fever, and for the obvious reason, that its progress and duration are so intimately dependent on the various lesions with which this disease is inseparably connected, as to preclude the notion of its progress or duration being influenced by any critical or depurative evacuations from the system.

The doctrine of critical days, therefore, must be considered in reference to typhus fever only.

A change in the aspect of a case of typhus, favorable or otherwise, is sometimes preceded by sweating more or less profuse and persistent, sometimes by copious deposit of lithates in the urine, by spontaneous diarrhœa, some form of cutaneous eruption, or occasionally, by the formation of an abscess. And this theory receives support from comparison with other forms of fever—the periodic and relapsing, for example—in which there is an abrupt termination of the febrile disturbance after a profuse and apparently salutary sweat.

When we take into consideration, however, the large proportion of cases in which the convalescence slowly, and, as it were, imperceptibly proceeds, without any evident critical event, we cannot resist the conclusion, that, as a general rule, the fever leaves the body without any marked evacuation, and that when a crisis does occur, it is to be regarded as an exceptional, though favorable, circumstance.

Again, it has been affirmed, that the change either to convalescence or to a fatal issue, happens on particular days, in preference to others, and hence the origin of critical days.

I may for a moment recall to your notice, that the traditional days on which the termination, or crisis, has been supposed to occur, are the third, fifth, seventh, ninth, eleventh, fourteenth, seventeenth, and twenty-first. The non-critical days are stated to be the intermediate days; and, as if to give this theory the appearance of being founded on exact observation, the fourth and the sixth have been considered *secondarily* critical.

The law of periodicity in intermittents—the precision with which the symptoms recur and terminate, as well as the crisis with which the solution of a periodic fever is almost invariably accompanied, are certainly amongst the most singular phenomena in the whole range of practical medicine.

Not less remarkable is the fixed period at which the different forms of efflorescence burst forth in the eruptive fevers, and no doubt in many respects, the class of continued fevers (typhus more especially) bear, as I formerly pointed out, a strong analogy to the exanthematous.

It is doubtful, however, if the doctrine of critical days, as applied to continued fevers, has been rigidly tested by accurate observations. In dealing with this subject, several circumstances should be kept in view.

1. The fact, that till within a recent period, the types or forms of fever have been unrecognized.
2. Various secondary lesions (complications) do occur, which materially influence, or interfere with, the ordinary, or average, duration of the disease.
3. There is often much difficulty in obtaining such a history of the case, as to admit of its commencement or invasion being accurately determined.
4. The intensity with which the febrile poison operates is by no means uniform, being sometimes sudden and severe, sometimes slow and followed by trivial effects.
5. In drawing conclusions from a large number of cases, there is a possibility that a proportion of acute diseases, not strictly fevers, may have been included.
6. The methods of estimating the duration of the fever, are seldom alike; for example, some fix the termination, not at the cessation of the symptoms or commencement of convalescence, but at the period when the health is completely re-established.

Lastly. In enteric fever, the lesions with which it is associated render its duration so uncertain, that it cannot be defined; it may terminate, as we have seen, in the first, second, or third week, or it may even be protracted to fifty or sixty days, and even beyond.

Anatomical lesions.—It has been stated—and there are certainly grounds for the opinion—that the changes which take place after death from typhus have not been subjected to the same rigorous scrutiny as those of enteric fever. This remark may be true as to the investigations of continental pathologists, as contrasted with their successful elucidation of the morbid anatomy of the latter disease; but the reason is obvious, if we consider how rarely epidemics of typhus have occurred in any part of the continent of Europe.

I cannot, however, admit that the pathology of typhus has been overlooked by British observers, though their labors have been more especially directed to recording the circumstances by which various outbreaks of epidemic fever have been distinguished from each other; their various types or forms, prevalence or numbers affected, etiology and modes of treatment; and on those points much valuable information has been obtained. But it cannot be denied that much of the obscurity and confusion that have prevailed in regard to the morbid anatomy of fevers in times not very remote, may be ascribed to the hesitation with which the doctrine of the identity or non-identity of the two principal varieties of the ordinary fevers of Britain—enteric fever and typhus—has been received. The distinction is, even in the present day, disputed by many, who, in defiance of the plainest illustrations and the most logical deductions, adhere to the untenable doctrine that the two forms of fever are essentially one and the same disease. But the scrutiny which the pathology of continued fevers has of late years undergone, has led to the important conclusion, that in one form there are fixed and invariable anatomical lesions, while the other is characterized by the absence, rather than the existence, of special lesions.

In examination of the bodies of persons who have died from typhus fever, without secondary or intercurrent local disease, in a considerable proportion, after the most careful search, no trace of disease in any organ or tissue can be discovered. In other instances, the only deviation from the normal state is congestion of internal parts, more especially of the mucous surfaces of organs.

Even when secondary affections have arisen and had an important influence on the severity and progress of the fever, or proved even the more immediate cause of death, they do not always leave corresponding effects on the organs or parts affected; so that it is more than probable that their function rather than their structure has been implicated in the febrile conflict.

The *Brain*, in a considerable proportion of cases, exhibits no trace of disease. It is sometimes less firm than natural, so that on removing it from the calvarium, portions of cerebral matter adhere to its investing membranes; but this is not common. This diminished consistence may be limited to the external or cortical substance, or it may be found also in the central parts—the formix and septum lucidum.

Engorgement of the sinuses and larger veins is not uncommon, and congestion of the cerebral substance, shown by an increased number of red points on the cut surface, is found in nearly half of the cases examined.

The *membranes* are more frequently altered than not.

The *pia mater* often bears evidence of congestion of both large and small vessels. With this congestion there may be a varying amount of subarachnoid serosity on the surface and at the base of the brain, or there may be more or less limpid fluid in the cavity of the ventricles.

Dr. Jenner has drawn attention to the occasional occurrence of hæmorrhage into the cavity of the arachnoid in typhus fever. He found this lesion in five out of thirty-nine cases, in which the head was opened. In every instance, the coagulum was in the form of a delicate red film, varying in thickness and color, and situated on the convex surface of the brain. In one, it consisted of two or three delicate fibrinous films only. In two of the five, the coagulum was confined to the right side; in three, it was double—that is, existed on both hemispheres. In one of the five, it was accompanied by effusion of blood into the subtance of the rectus abdominis muscle. The brain substance was apparently healthy in all; and as no aperture could be found from which the blood had escaped, the source of the hæmorrhage could not be ascertained.

The Pharynx and Larynx, in the examinations made at the Fever Hospital (by Dr. Jenner), were both found normal in seventeen out of twenty-six cases. In five, there were signs of inflammation of both larynx and pharynx, and in one of the five there was ulceration of the larynx. The larynx alone was inflamed—that is, without co-existing lesion of the pharynx—in one instance only; but in no instance was the pharynx diseased and the larynx healthy. In not a single instance was there ulceration of the pharynx—typhus showing in this respect a marked difference from enteric fever, in which latter it occurred in one-third of the bodies examined.

Pulmonary Organs.—In a considerable proportion of cases, the mucous membrane of the *bronchial tubes* is more or less congested, indicated by dark-red injection of the membrane, with increase of the ordinary secretion, or with frothy serosity.

In the *pulmonary tissue*, the principal lesion observed is congestion, generally of the posterior portions, sometimes of one, sometimes of both lungs, and with or without diminished consistence of the affected parts. This congested state may be accompanied with consolidation, constituting non-granular lobular congestion; but the granular lobular consolidation so frequently found in enteric fever is much less common—indeed, it is rarely observed in typhus.

In some cases, the only change found is colorless serosity in some portions of lung, often in the upper lobes, the depending or inferior being more or less congested.

Pulmonary gangrene is another incidental though rare lesion in typhus, and when it does happen, can scarcely be mistaken, from the peculiar fœtid odor and complete destruction of the portion of lung tissue involved. It would appear to be due less to pre-existing inflammation than to the action of a specific poison on the lungs. It is generally found in one or more circumscribed portions of irregular form, of a dark-brown or greenish color, and more frequently at the summit than at the base of the lung. The surrounding lung tissue has an unhealthy appearance, and when cut into is soft and lacerable, as if ready to pass into mortification. Sometimes a pulpy membrane may be seen on such portions of the sphacelated mass as have become detached, and from which a thin bloody sanies has been secreted.

Pleuræ.—In some subjects serous fluid in varying amount is found in the pleural cavity. Pleuritic inflammation rarely occurs in typhus, and consequently the pleural membrane seldom shows evidence of it; and when it has happened, there is seldom a coating of lymph on the membrane, but more commonly shreds are mixed with the effused fluid in the pleural sac: sometimes the pleural surfaces adhere by a layer, which is soft and easily detached.

The Heart.—There is in general no alteration in this organ, except in the more severe and malignant forms of typhus, when the muscular substance is soft and lacerable, evidently partaking of the diminished consistence of the solids in general. The lining membrane is frequently stained of a dark-red color. The blood found in the cavities is either fluid or in soft masses, showing a defibrinated condition of this fluid.

Alimentary canal.—The great pathological difference between typhus and enteric fever consists in the invariable absence in the one, and the equally invariable presence in the other, of distinctive lesions. In typhus, with the exception of occasional instances of softening of portions of the mucous membrane of the stomach, the whole tract of the alimentary canal is in a normal state. The mesenteric glands are also free from disease. In the large intestines, with the occasional exception of the mucous membrane of the cæcum and colon being of a deep-red color, from increased vascularity, there is no deviation from their ordinary natural condition.

The Spleen.—In typhus the spleen is normal in about half the cases examined after death. In the other half, it is simply softened, without increase of volume or size, a small proportion only exhibiting both softening and enlargement.

From the dissections performed at the Fever Hospital, Dr. Jenner concludes that splenic lesions are found both in typhus and enteric fever, but the spleen is larger in the latter than in the former; in typhus, it is much less enlarged in those above the age of forty than in those under that age. Splenic softening is also more frequent in typhus after the age of fifty than before, and it is much more often found when death takes place before than after the fourteenth day of the disease. It seems, too, that in both forms, splenic softening is more frequently observed when death takes place at an early than at a late period of either disease.

The *Liver* does not undergo any special change that can be ascribed to the agency of the febrile poison. It may partake of the general softness of the solids; or when cut into, may be gorged with thick dark blood; but whether this congestion existed during life, or is to be regarded as due to changes occurring in the act of dissolution, is yet undetermined.

This short summary of the morbid anatomy of typhus shows that there are no special lesions that can be said to be peculiar to this form of fever. The most common, and perhaps the most constant changes are due to congestion of organs more especially of their mucous surfaces; but that even these changes are not an essential or invariable element of typhus is proved by the fact, that in a large number of bodies, after the most careful examination, no trace of disease in any organ or tissue can be discovered. When secondary affections arise in its progress, as already stated, they are to be regarded as incidental, having, nevertheless, always an important bearing on the progress and result of the fever, and as being not unfrequently the immediate cause of death.

Changes in the Blood.—The blood, which has from remote ages been supposed to undergo marked changes in its physical properties in fevers, has been, in recent times, subjected to chemical analysis. These investigations show that several of its constituent principles become altered, either primarily or secondarily.

I need scarcely mention that healthy blood contains, besides water, four essential constituents—*corpuscles, fibrine, albumen* and *certain saline matters.* The fibrine, albumen, salts, and water, constitute the *liquor sanguinis*—a transparent coloress fluid, in which the corpuscles, red and white, are suspended and carried along in the living vessels.[*]

Again, when blood is drawn from the body, as in ordinary venesection, and allowed to remain at rest, it separates into crassamentum and serum.

The *crassamentum* consists of fibrine, in which the red and white corpuscles are blended together with a small quantity of serous fluid.

The *serum* differs from the liquor sanguinis in one respect only—that it does not contain fibrine; it contains, however, albumen, which gives it the property of coagulating by heat; and if a degree of heat sufficient to decompose the animal matter be applied, the residuum becomes converted into earthy and alkaline salts.

In regard to the proportional or mean amount of these constituents, Becquerel and Rodier found that in 1000 parts of healthy blood there are of

Water	791·1
Fibrine	2·2
Corpuscles	127·2
Albumen	70·5
Fatty matters	1·6
Extractive matters, salts, and loss	7·4
	1000·0

So much for the constituents of *healthy* blood, the outline of which now given may be useful for comparison with the changes which it has been observed to undergo in fevers. But it is to be understood that the observations to be made have reference to the blood in both forms of fever, (enteric and typhus;) the difference in either being trivial.

The blood, in fever, contains a smaller amount of fibrine than in health, and is often deficient also in albumen. Hence, when bloodletting has been resorted to in the treatment, and more especially when performed in the advanced stage, it often coagulates imperfectly, the crassamentum being soft and diffluent, and rarely exhibiting the buffy coat. It is likewise more liable to putrefy than healthy blood, or than blood abstracted in other diseases. This deficiency in the fibrine of the blood in fevers, when uncomplicated, tends to distinguish it from that in acute inflammations, in which there is an increased amount of fibrine, in proportion to the intensity of the disease.

This gradual defibrination of the blood in fevers cannot be ascribed either to blood letting (if practised in their treatment) or to other antiphlogistic measures, since in other acute diseases those circumstances (bloodletting and other depletives) do not appear to be followed by diminution—nay, rather by augmentation—of the fibrine. It has, moreover, been ascertained that if a local inflammation spring up in the progress of fever, the amount of fibrine

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[*] In healthy blood—

Fibrine, Albumen, Salts, Water,	Constitute the liquor sanguinis.

In coagulated Blood—

Fibrine, Corpuscles,	Constitute the crassamentum.
Albumen, Salts, Water,	Constitute the serum.

becomes increased, though it is still less than in ordinary inflammation, the febrile condition apparently influencing the quantitative amount of this constitutent, when an intercurrent or local inflammation has arisen. Besides, as soon as the period of convalescence arrives, the fibrine begins to increase, and before the prescribed nourishment could be so elaborated as to contribute to this change, and which appears to proceed with advancing convalescence.

With this diminution of fibrine, it has been shown by the experiments of Andral and Gavarret, that in fevers a considerable increase in the corpuscles takes place, forming another point of contrast with the blood in primary inflammations, in which there is a slow but certain diminution in the corpuscles.

It may, therefore, be concluded—first, that in continued fevers, the fibrine gradually decreases in proportion to the duration of the fever, never exceeding in amount the normal standard, but being much more frequently below it; and, second, that the corpuscles become increased in amount.

It appears, too, by these researches, that the residue of the serum, and solid constitutents generally, are little, if at all, diminished in amount, notwithstanding the statements made by some writers that, according to the duration and intensity of the fever, the salts of the blood, especially chloride of sodium, become decreased, a notable increase of water at the same time taking place.

On this doctrine,—the supposed origin of fevers in morbid changes in the blood,—I may observe, that when we reflect that the blood, which was aptly termed by Bordeu *fluid flesh*, has the same proximate principles as the solids of the body, that it is organized, and apparently endowed with vitality—the doctrine that it is liable to disease rests on a more certain foundation than mere vague hypothesis. Whether the fever poison acts primarily on the blood, producing changes in its sensible properties, or whether, as some are inclined to believe, the changes are secondary, it is scarcely worth while to inquire. Indeed, we have no data to guide us in this inquiry, except the statements of Dr. Stevens, who affirms that he and other practitioners in the West Indies observed, that in persons exposed to the fever-producing malaria, the blood underwent marked changes, even before the symptoms became developed.

Again, I am inclined to believe, that the different forms of fever arise from distinct poisons, however induced; that the true typhus poison acts on the blood alone; that enteric fever is produced by a poison, *sui generis*, which has a compound action on the blood and on the solids, inducing special lesions, with which, as we have seen, this type of fever is invariably associated; and that it is more than probable that the relapsing fever, to be next described, has also its origin in a distinct poison, though from its comparative infrequency, little or nothing, as yet, has been satisfactorily made out as to its etiology. But I know no department of the pathology of fevers more important and more worthy of further elucidation than their connexion with morbid states of the blood.

Diagnosis.—The importance of forming a correct diagnosis between the two forms of fever—enteric and typhus—cannot be over-estimated, the one differing from the other in so many prominent circumstances, and more especially, as we shall presently show, in their treatment.

In order to arrive at a correct conclusion as to their differential diagnosis, it will be necessary to institute a comparison of the individual symptoms of each form.

1. It has been pointed out, that in typhus fever the accession of the symptoms is more sudden than in enteric fever, in which it is generally gradual, slow, and insidious.

2. The heat of skin is more constant and more marked in the early stage of typhus; during the exacerbations, it is often pungent and accompanied by flushing. In enteric fever, the heat of skin is moderate, or it may be entirely absent.

3. The brain symptoms, especially delirium, intellectual dulness, and stupor, are more strongly and early developed in typhus. In enteric fever, the cerebral symptoms appear later—usually not until after the first week—and slowly and gradually increase in severity.

4. In typhus, the bowels are generally confined, so as to require the occasional administration of aperients. There is seldom diarrhœa, and if the bowels act more frequently than usual, the evacuations are not watery. There is, besides, no gurgling on pressing the region of the cæcum, and rarely meteorism. In enteric fever, the evacuations, on the other hand, are generally frequent and watery, and accompanied with griping. The belly is tense, generally inflated, and gurgling noise may often be detected by pressure over the right iliac fossa.

5. Epistaxis is rare in typhus; not uncommon in enteric fever.

6. Intestinal hæmorrhage is very rare, almost unknown, in typhus; frequent in enteric fever.

7. Emaciation is much less marked in typhus than in enteric fever; in the latter, when protracted, it is often extreme.

8. The cutaneous rash is quite dissimilar in the two diseases. In typhus, it is dark and mottled, often extensively diffused over the skin, unchanged by pressure, and persists throughout the disease. In enteric fever, the rose spots are bright, isolated, slightly raised, fade or entirely disappear on pressure, and are found chiefly on the chest and abdomen: They last for a few days, and are succeeded by a fresh crop, which goes through a similar course until the termination of the fever.

9. The anatomical characters (or lesions are distinctive. In typhus, Peyer's patches and corresponding mesenteric glands are in their natural condition. The vessels and sinuses of the brain are more generally gorged with dark blood. The lungs exhibit more frequently evidence of congestion, especially of the posterior and inferior portions, in typhus than in enteric fever.

In enteric fever, the alteration in Peyer's patches and corresponding mesenteric glands form the great distinguishing characteristics of the disease. The spleen is more often enlarged and softened. Ulceration of the pharynx and œsophagus, and softening of the mucous membrane of the stomach, are more common than in typhus.

10. The duration of the two forms may also serve as diagnostic marks. In typhus it is generally less protracted, terminating in recovery or death within the second week, much more frequently than in enteric fever. We have stated that the average duration of typhus does not exceed fourteen or fifteen days; and if prolonged beyond that period, it is generally owing to some secondary affection or complication. In enteric fever, the average duration is longer—from twenty to thirty days, and extending, as has been shown, in some instances, to forty, fifty, or sixty days, or even beyond.

In children there is more difficulty in determining the diagnosis of the various forms of febrile diseases than in adults. Let me mention a few of the more prominent.

1. Disorders of the gastric system attended with fever are very common, especially amongst the children of the poor, and often simulate enteric fever; or, perhaps, it more frequently happens that the latter is mistaken, and treated as an acute gastric affection by irritating purgatives. If, however, the symptoms that are so peculiar to enteric fever be kept in view, the distinction is less difficult. For example, in enteric fever, the invasion is not sudden, nor can the symptoms be traced to dietetic mismanagement; the prostration is more marked, the child is more restless and agitated, and often delirious in the night; the stools are frequent and watery; the belly tender and inflated; the splenic region dull; and above all, the characteristic rose spots, if present, and the prolonged duration of the symptoms, are sufficient to indicate that the child is suffering from enteric fever.

2. This form of fever (enteric) may be distinguished from infantile gastric remittent by the irregularity of the paroxysms in the latter; by the absence of rose spots; by the large, often solid evacuations, requiring active aperients for their dislodgment; by the occasional admixture of undigested aliment in the secretions expelled from the bowels; and by decided improvement resulting from a course of treatment that would certainly aggravate, if it did not hopelessly augment, enteric fever.

It is right, however, that I should mention that some physicians of the present day disbelieve in the existence of this infantile gastric remittent fever, without affection of Peyer's patches, which they state to be a constant element in this common infantile disorder. I cannot adopt this conclusion—at least, I am unwilling to do so—until there be better evidence by accumulated observations of the appearances in the intestine, when this form of gastric fever proves fatal, which, I may observe, rarely happens—a circumstance to be regarded as another distinctive character, and showing clearly, to my mind, the nonidentity of the two diseases.

3. Another disease of childhood, which it may be difficult to distinguish from enteric fever is meningitis, and more especially that form which occurs in strumous children—tubercular meningitis. In this affection, the symptoms from the very commencement indicate severe cerebral disease—violent pain in the head, flushing, aversion to light, and as the disease advances, drowsiness, delirium, dilated pupils, and finally deep coma, sometimes alternating with convulsions. There may be sickness, and perhaps vomiting, but the bowels are generally confined. The rose spots, too, so characteristic of enteric fever, are absent.

If we compare these symptoms with those of enteric fever, it will be found that the cerebral symptoms are much less prominent in the latter, at all events in the early period; that there is seldom sickness or vomiting; almost invariably diarrhœa; meteorism; often rose spots; dry, fissured tongue; and, when the fever is protracted, exudation of sordes on the lips and teeth; progressive and often extreme emaciation; sloughing of parts subjected to pressure; and death by gradual exhaustion, rarely, however, preceded by convulsions. The duration of the two diseases is also dissimilar. Meningitis terminates either in recovery or death within the third week, while enteric fever may be protracted beyond the thirtieth or fortieth day.

There is less difficulty in distinguishing cases of infantile typhus. The absence of gastric symptoms, the less pronounced cerebral affection, the less pungent heat of skin, the morbillous eruption, if present, the propagation of the disease by contagion, and its comparatively short and definite duration, are sufficient to distinguish typhus fever from other acute disorders of infancy and childhood.

LECTURE IX.

RELAPSING OR RECURRENT FEVER.

Historical sketch. Nature, symptoms and progress—anatomical characters. Febricula, its nature and symptoms.

This peculiar form of fever—not of frequent occurrence, but appearing as the leading feature of some epidemics—derives its name from a relapse or recurrence of the symptoms taking place after a definite period of convalescence, so that there appears as it were, two distinct fevers blended in one disease.

In my first lecture I stated that it had been recognised by Dr. Rutty more than a century ago (in 1739), and alluded to by him in his history of the diseases of Dublin. "In July, August, September, and October," writes Dr. Rutty, "a fever prevailed which terminated in four, for the most part in five or six days, sometimes in nine, and commonly in a critical sweat: it was far from being mortal. I was assured of seventy of the poorer sort at the same time in this fever, abandoned to the use of whey and God's good providence, who all recovered. The crisis, however, was very imperfect, for they were subject to relapses even sometimes to the third time." He describes the same fever as occurring also in 1740, 1745, 1764, and

1765; remarking that in the fever of 1765, the bowels were in some instances remarkably affected.*

In the records of subsequent Irish epidemics, we find frequent allusion made to relapses after apparent convalescence, but from want of more precise details, we can only infer that sporadic cases of relapsing fever had been observed during the epidemic visitations of the time. This seems to have been the case more particularly in the epidemic fever of 1817, 1818, and 1820, which, from the crisis almost invariably taking place on the fifth day, was popularly termed *the five days fever*—the disease always terminating by copious sweating.

From the reports of Drs. Barker and Cheyne of the fever that prevailed in the same years, relapses seem also to have been very common, for at Cork the numbers who relapsed are computed at 2000, and at Waterford it was estimated that a fifth or sixth of those who were attacked with fever also relapsed.

In his description of the fever of 1826, Dr. O'Brien mentions that it was distinguished by its short periods, terminating in three, five, seven, or nine days; but the second of these periods was the most frequent. The person, previously in perfect health, was seized with sickness at the stomach, headache, pain in the small of the back, and chilliness. On the approach of the evening, all these symptoms increased, and the febrile paroxysm was formed; the chilliness increased to a rigor, the nausea to vomiting, which harassed the patient during the first three or four days in the form of an empty straining, and frequently continued through the whole course. On the evening of the fifth or seventh day, the *exacerbatio critica* commenced, which, mostly with the intervention of a rigor, but very frequently without this symptom, terminated in a profuse perspiration, which continued through the night, so that on the following morning the crisis was complete, and the patient generally became convalescent.

These particulars correspond with the epidemic relapsing fever of Edinburgh, except that in the latter, the abrupt termination happened in the majority of cases on the seventh day.

We possess, moreover, excellent histories of this form of fever, as it has been observed in different parts of Scotland, at various periods within the last forty years. It constituted a large portion of the Edinburgh epidemic (1817–20) described by Dr. Welsh,† and seems to have been even more common in Glasgow a quarter of a century afterwards, for we find in the published records of the Glasgow Infirmary that in ten years—from 1843 to 1853—no fewer than 7804 cases of this relapsing fever were admitted into this hospital; and when we reflect that this form constituted a proportion only of the fewer cases, some idea may be gained of the prevalence of epidemic fever in Glasgow in those years.

I had the opportunity of witnessing this fever when it appeared in Edinburgh in 1817–20, in the description of which, after detailing its prominent features, Dr. Welsh states, that of 743 tabulated cases, 183 relapsed—being in the proportion of one in five; but nothing is mentioned that would lead to the inference that he regarded these relapsing cases as a distinct or peculiar type of fever; indeed, this monograph appears to have been written rather with the view of showing the supposed advantages of indiscriminate and unnecessary waste of blood in its treatment, than of directing attention to the peculiar features of a form of fever differing in many respects from previous epidemic visitations.

Dr. Wardell,* in an excellent account of the Scotch epidemic fever of 1843–44, mentions, that of 980 cases, 603 had one or more relapses; 67 had two relapses; nine had three; and one had four; and there were one or two other instances in which the patient had one fewer than five separate and distinct attacks. From this account it appears that not less than two-thirds relapsed before leaving the hospital; and as Dr. Wardell assumes, when it is considered that many might have a return after their discharge, it would be no exaggeration to state that three-fourths relapsed.

We find also from Dr. Cormack's work,† that unless anti-periodic remedies were given, one or more relapses took place, but in a limited number of cases only were these remedies successful in preventing relapses. In the cases observed at the same period, and reported by Dr. Craigie, 110 out of 182 relapsed, or about 60½ per cent.

In and around London this relapsing fever has been less frequently witnessed. If the table of admissions into the London Fever Hospital be referred to, it will appear, that of the numbers of all forms received in ten years between 1848 and 1857, there were only 441 examples of it, and since 1854 there has not been a single case.

From these details it may be inferred that this somewhat singular disease has never constituted the character of an entire epidemic, but only of a proportion of the cases. It is extremely probable that it originates from a poison *sui generis*, and that it is contagious does not admit of doubt. Moreover, if we examine closely this fever as it has prevailed at different times, though there may have been a great resemblance in the general features of the disease, a marked difference in epidemic constitution will be evident; so that, as has been pointed out by Dr. Wardell, the relapsing fever of 1817–20 differed materially from that of 1843–44, in so far that the former was so much more acute in form than the latter, in which, too, the relapses were far more frequent, and the yellow cases more numerous. This shows that in relapsing, as in other forms of fever, differences in type, more or less marked, take place, and require to be carefully observed when an epidemic first appears.

As to the nature of this fever, by some it has been thought to resemble the *Suette*, or sweating fever of Normandy, and by others, the yellow fever of the West Indies. Dr. Wardell says (*op. cit.*), "there were undoubtedly some considerations which led to the supposition that the epidemic relapsing fever bore certain resemblance to the Suette, or sweating fever of Normandy. In a few instances, though these were of rare occurrence, the epidermoid tissue was raised into vesicular eminences, varying from the size of a millet seed to the section of a small pea, these vesicles contain a transparent fluid, and quite unattended with any areolar flush. On the third day they became shrivelled and opaque, and desquamated in thin furfuraceous scales. From the occasional presence of these bullæ with other more logical characters, some degree of similarity certainly was manifest between it and the Suette. There were physicians who endeavored to show its near alliance to the yellow fever of the West Indies—indeed gave, it as their opinion that, in some respects, there was a positive identity between the two, only that the epidemic prevalent in this country had become greatly modified by climate and other circumstances calculated to alter its general features. When we take into consideration the unusual number of yellow cases, together with two or three cases of less important correspondent symptoms, we are compelled to admit the assertion is not wholly unfounded. No trace of its importation into Scotland, however, could be found, which has generally been the case where yellow fever has been communicated from one country to another."

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* A Chronological History of the Weather and Seasons, and of the Prevailing Diseases of Dublin, by John Rutty, M.D. London, 1770, pp. 75 and 76.

† Practical Treatise on the Efficacy of Bloodletting in the Epidemic Fever of Edinburgh.

* Medical Gazette, vols xxxvii. and xl

† On the Epidemic Fever at present prevailing in Edinburgh and other Towns. 1843.

Relapsing fever has always appeared to me to be a from intermediate between the continued and periodic, but having a more close analogy to the latter. I have been led to this view by considering the suddenness of the invasion, the abrupt termination of the symptoms after a definite period by copious and apparently critical sweat, the interruption of the convalescence by a similar though shorter paroxysm, or it may be paroxysms, of nearly certain duration, and a final abrupt cessation of the disease generally after sweating. Even in the more severe cases, in which there was gastric disturbance with jaundice and occasional cerebral symptoms, the resemblance to the malignant or pernicious periodic fevers, more particularly those included under the bilious remittents of tropical climates, is striking.

Symptoms and progress.—In relapsing fever the invasion is sudden. The patient, previously in good health, without warning, is seized with a feeling of indisposition, complaining of chilliness or shivering, acute headache, languor and lassitude, severe muscular aching, and arthritic pains. The appetite fails, the skin becomes hot and dry, the tongue white, the desire for fluids constant, and the urine scanty and high colored. Towards evening the symptoms are aggravated; the night is passed either in restless agitation or with snatches of unrefreshing sleep. Occasionally the heat of skin is relieved by irregular sweating, but still the other symptoms suffer no diminution. Vomiting of bilious fluid, often accompanied with pain at the epigastrium, is an early and nearly constant symptom. It may occur in the first or primary fever only, or it may come on in the relapse also. As the disease progresses, the patient becomes more prostrate and disinclined for bodily or mental exertion, the pulse more rapid and tense, the tongue more thickly coated, the bowels constipated, the muscular and arthritic pains more acute; and the nights are passed in restlessness and wakefulness, unless the nervous system be calmed by the aid of opiates.

About the third day a marked remission of the symptoms is often observed; but whether there be a remission or not, at a period varying from three to seven days—more commonly on the fifth day—a copious general sweat breaks out, and almost immediately afterwards the fever vanishes, leaving the patient unexpectedly free from the painful symptoms with which a few hours previously he had been harassed. Dr. Cormack, who watched the phases of this singular disease, tells us that the change for the better was often sudden and complete, the patient one day moaning and groaning in pain, and on the next at his ease and cheerful, complaining only of hunger and weakness.

This apparent convalescence, however, is not of long duration, for when the patient and his medical attendant reasonably conclude that, from the favorable change that has occurred, the fever is at an end, and that time only is required for complete restoration to health, a sudden and unlooked-for recurrence of the previous symptoms takes place. This relapse happens at some period between the twelfth and the twentieth day (from the beginning of the disease), or on or about the seventh after the crisis, and without apparent cause or indiscretion on the part of the patient. The relapse is indicated by the same symptoms as the primary fever—rigors, headache, muscular aching, hot skin, thirst, quickened pulse (the rapidity being often disproportionate to the other symptoms), coated tongue, and loss of appetite.

After a few days—two, three, four, or five—this second attack suddenly ceases after a profuse sweat, and the patient becomes a second time convalescent. The return to health is comparatively rapid and complete in the young and vigorous, but in the aged, and especially in those who have been previously in indifferent health, the strength is more slowly regained.

Nor does the mildness or severity of the relapse appear to be influenced by the previous attack; for it has been observed that the symptoms of the second are sometimes more mild, at other times more severe, than those of the primary fever. In some instances, for example, in which the first attack was by no means severe, the second has been characterized by delirium, deep jaundice, violent purging, and other grave symptoms. Such cases are, however, not common.

Sometimes, again, a second but mild relapse takes place, generally about the twenty-first day; and I have already alluded to the circumstance, that patients have suffered three, four, and even five separate and distinct attacks. Such frequent relapsings have been seldom noticed in the epidemics in England.

Other anomalies are, in some instances, observed. Thus, the symptoms of the relapse, instead of appearing suddenly, come on gradually and insidiously; or instead of the ordinary well-marked progress of the symptoms, there may be only slight acceleration of pulse, and a little increased heat of skin, to mark its occurrence; occasionally, in place of the abrupt termination of the attack by sweating, the crisis has apparently been connected with some other evacuation, such as hæmorrhage from the nose, diarrhœa, or the menstrual discharge. In some cases, on the other hand, in which the ordinary symptoms of the first attack have been well-marked, there has been no relapse, nor anything approaching to a recurrence.

There appears, too, to be a greater tendency in relapsing fever than in other acute diseases in pregnant women, to abortion or premature delivery. So invariably, indeed, according to Dr. Wardell's experience, did this happen, that throughout the whole duration of the Edinburgh epidemic—a period extending over at least fourteen or fifteen months—he never discovered even a solitary instance of the impregnated uterus not expelling its contents; and the statements of others, whose opportunities of observing this fever were equally ample, confirm this statement. The same tendency to abortion was observed in the patients received into the London Fever Hospital.

The relapsing fever sometimes, however, assumes a more severe character, the aspect of the symptoms from the commencement indicating a much more serious disease. The rigors are violent; the heat of skin is intense; the heart's action depressed, indicated by the softness and compressibility of the pulse; the patient complains of extreme prostration, and feeling of exhaustion or sinking; there is often incessant vomiting of bilious fluid, accompanied with a more or less deep jaundiced appearance of the skin, though the evacuations exhibit no deficiency of bilious admixture, but the urine is generally loaded with bile.

In some cases, sudden collapse takes place—the pulse becomes rapid and feeble; the skin universally cold, more especially the hands and feet; the face livid; partial or complete unconsciousness succeeds; the sphincters become relaxed, and death takes place after a few hours.

The *diagnosis* of relapsing fever may be given in a few words.

It differs from other forms of fever—1, by its sudden invasion; 2, by the short duration of the primary fever, and its termination by an evident crisis; 3, by the almost uniform occurrence of a relapse—occasionally a second or third; 4, by the unusual number of cases with more or less jaundice, or yellow color of the skin, accompanied often with gastro-enteritic and gastro-splenic symptoms; and 5, by the absence of characteristic rash.

The small *mortality*, or death-rate, of relapsing fever shows its comparative mildness, being about one in twenty-five, or under 3·9 per cent.

Anatomical characters.—This singular form of fever, if uncomplicated, seldom proves fatal. In examination of the fatal cases, no special lesion, so invariably present as to indicate the anatomical character of the disease, has been discovered.

The *blood* has in some cases been found throughout the body in a fluid state, indicating a decrease in the normal amount of fibrin. I am not aware that it has been subjected to further chemical analysis.

The *brain*, with the exception of a moderate amount of subarachnoid serosity, and perhaps an increased quantity in the ventricles, shows no remarkable deviation from a normal state.

The *heart* and *lungs* exhibit no evidence of disease.

The *liver* has been found enlarged from congestion, and the gall-bladder more than usually distended with bile; and, what may be considered worthy of being noted, no obstruction to the free escape of the bile through the ducts, even in cases in which the jaundice had been well marked, can be detected.

No disease in any portion of the alimentary canal is discoverable.

The *spleen* exhibits the most marked and constant lesion, more especially as to size or volume. It was noticed in a considerable number of cases in the Edinburgh epidemic, 1843-4. Dr. Wardell saw several in which this organ was three or four times larger than natural; in one, it weighed twenty ounces. This splenic enlargement was observed by other physicians during the same epidemic; thus, in a fatal case examined at the London Fever Hospital, the spleen weighed thirty-eight ounces. It thus appears that this organ is occasionally larger in relapsing than in either typhus or enteric fever.

Urea has been found in the blood. In a fatal case recorded by Dr. Wardell, in which the patient fell into a state of stupor twenty-four hours before death, crystals of nitrate of urea were discovered in considerable abundance in the blood taken by cupping, ordered for the relief of the cerebral symptoms.

It thus appears that, with the exception of splenic enlargement,—a lesion common to the other forms of fever, continued and periodic,—there is no special lesion found after death in relapsing fever. If structural changes be discovered, they are to be regarded as accidental, and due to some secondary or intercurrent affection.

FEBRICULA.

This term is applied to a fever of short duration, and includes the *ephemera*, a fever which generally lasts twenty-four hours—seldom more than thirty-six, though instances have occurred in which the symptoms have persisted for three days.

This *ephemeral* or *diurnal* fever is very rare. I have seen a few examples of it, but it does not exhibit anything peculiar, except its limited duration; the symptoms, in fact, are those of the commencement of an acute febrile disease, with abrupt termination.

It has been supposed to arise from violent exercise, great fatigue, errors in diet, sudden mental excitement, the influence of excessive heat, as that of tropical climates, or exposure to inclement weather. Its termination is generally marked by a crisis, such as a moderate sweat, or by herpetic eruption, often around the lips. An ephemeral fever is occasionally observed in hot climates, the paroxysm of which, though of short duration, is very violent, and occasionally even fatal, by congestion of some important organ, more frequently of the brain, or liver and spleen.

The *febricula*, properly so called, comes on somewhat suddenly by chills, followed by irregular paroxysms of heat of skin, by loss of appetite, thirst, quick full pulse, white tongue, loaded urine, acute headache, and sometimes delirium. These symptoms, more severe in some cases than in others, continue for a few days—seldom more than a week—then gradually subside, often after a moderate diaphoresis or copious lithic deposit in the urine, and the patient in a few day regains his ordinary health.

I must say, however, that though I see almost daily cases of a short, mild fever, in which there is no special lesion or complication, at least so far as indicated by symptoms, I am not inclined to encumber our nosology of fevers with a doubtful novelty. It is a very convenient mode of classifying mild cases of either form of typhus, or of relapsing fever in which the second fever or relapse does not occur. Indeed, I do not know a single pathognomonic feature of what is called febricula, except that it runs its course in a few days and is always a very mild disease. But we have seen that ordinary typhus, as well as enteric fever, are often mild and of short duration, scarcely requiring treatment; but it surely does not require that a new nosological term should be introduced merely to accommodate such cases.

Febricula is said not to be contagious; but I apprehend that, if under this name are included cases of mild typhus, or of relapsing fever without the relapse, no one can predict with certainty that the disease will not spread.

Again, if uncomplicated, it is never fatal; but we have seen that secondary lesions arise in the progress of both typhus and enteric fever, and therefore some intercurrent local inflammation may spring up in cases of so-called febricula, the more common being some form of pulmonary affection, by which its progress may be protracted.

But on the whole question of febricula—whether it should be considered as a distinct form of fever, or merely as embracing the milder forms of typhus and enteric fever—my own opinion is in favor of the latter view. In the existence and occasional appearance of ephemera as a distinct form of acute fever I unhesitatingly believe, and it is very probable that it may, and does occasionally, lapse into a mild acute typhus—the synocha of some writers—and run its course in a few days.

A Discovery of Skeletons.—In a field at Lecellesur-Loire, forty-two skeletons have been discovered. The field has never served as a cemetery. It is the conviction of the authorities that the forty-two persons have been murdered. Medical opinions have been given that the bodies have been interred upwards of thirty years. Some trade implements found with them indicated the occupation of the interred persons to have been that of pedlars. The French code does not allow prosecution for capital crimes after twenty years have elapsed.

ROYAL COLLEGE OF PHYSICIANS, LONDON.

Gulstonian Lectures

FOR 1860.

ON THE THEORY AND THERAPEUTICS

OF

CONVULSIVE DISEASES,

ESPECIALLY OF

EPILEPSY.

By Charles Bland Radcliffe, M.D.

Fellow of the College.
Physician to the Westminster Hospital, etc.

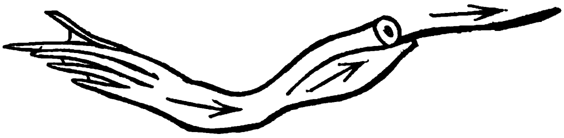
LECTURE I.—(*Concluded from June No.*)

In the period of alternate contraction, then, there would seem to be one and the same rule for the muscular movements resulting from the action of the galvanic current upon nerve—a rule by which the *muscle is made to contract at the beginning of the direct, and at the end of the inverse, currents.*

How, then, is this? Why is it that muscle contracts thus alternately? It is, perhaps, too much to expect a full answer to this question at present; but a partial answer, as it seems to me, may be found in the collation of the three facts which follow.

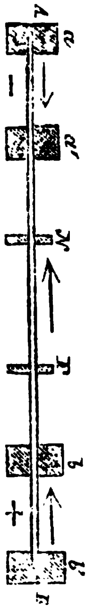
The first fact is this—that the direction of the nerve-current in the sciatic nerve of a frog (except in those last moments in which the action of the galvanic current upon the nerve gives rise to the "voltatic alternatives") is *inverse* or centripetal. In these last moments the nerve-current may be sometimes inverse and sometimes direct; and this change may take place more than once, but, except in these last moments, the direction of this current is, as I have said, always *inverse*.

Fig. 7.



The second fact is furnished by Professor du Bois-Reymond in an experiment in which the two ends of a long portion of nerve are placed upon the cushions of two galvanometers and the middle of the same nerve is laid across the poles of a galvanic apparatus. Looking at the needles of the galvanometer before passing the galvanic current, these needles are seen to diverge under the action of the nerve-current, and from the direction of this divergence it is evident that this current sets from the end to the side of the nerve;—looking at these needles while the galvanic current is passing, one needle is found to move still further from zero, the other is found to return towards zero. Let $A\ B$ be the nerve; let the arrows $a\ a'$ and $b\ b'$ be the nerve-currents included between the cushions $a\ a'$ and $b\ b'$ of two galvanometer; and let the arrow *P N* be the current between the poles (*P*, *N*) of the galvanic apparatus; and under this arrangement, the needle of the galvanometer will recede and show increase of current ( ) at the end *B*, where the nerve-current and galvanic current coincide in their direction; and at the end *A*, where the two currents, natural and artificial, do not coincide in their direction, the needle of the galvanometer will go back and show decrease of nerve-current (—).

Fig. 8.



The third fact, which has been recently furnished by Professor Eckardt,* is to be found in an experiment which may be illustrated by means of the two following figures:—In this experiment the nerve of the leg of a frog, properly prepared for the purpose, is placed, one portion (that nearest to the leg) across the poles (*I I'*) of an induction coil, another portion across the poles (*P N*) of a galvanic apparatus. Having done this, the leg is first thrown into a state of tetanus by passing a series of induction currents, and then, the tetanizing influence still continuing in operation, the continuous current of the galvanic apparatus is transmitted in turn to and from the leg. This is the experiment. The result, which is not a little remarkable, is—that the tetanus ceases when, as in *Fig. 9*, the inverse current passes, and continues when, as in Fig. 10, the direct current passes. Nor is this result altered by inverting the order in which the continuous and induction currents are made to act upon the nerve. Thus applied after the direct current the induction currents produce contraction, but not so if they are applied after the inverse current. Nay, it would even seem as if the direct current is actually favorable to the production of tetanus; or, with this current passing, a solution of salt, which of itself is too weak to cause tetanus, will have this effect. In observing this fact, Professor Eckhardt proceeds as follows:—First of all, he tetanizes the limb by placing the portion of nerve nearest to it in a strong solution of salt; after this, he adds water until the strength of the saline solution is no longer sufficient to provoke this state of contraction in the muscles; and then, all things being as they were, he passes the direct current. *The result is that the tetanus immediately returns.*

Fig. 9.

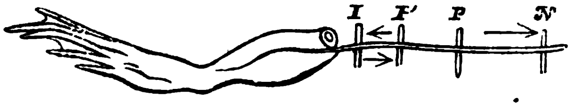
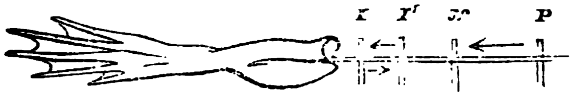


Fig. 10.



Now, on comparing this last fact with the two previous facts, we may have, as it seems to me, some insight into the mode by which the galvanic current acts upon the nerve in the period of alternate contraction. On the one hand, it is seen that tetanus is prevented or arrested by the inverse current. Tetanus is prevented or arrested, that is to say, when (as the first and second facts show) the galvanic current coincides in direction with, and imparts power to, the nerve-current. On the other hand, it is seen that tetanus is *not* prevented or arrested by the direct current. Tetanus is not prevented or arrested, that is to say, when (as the first and second facts still show) the galvanic current differs in direction from, and diminishes the power of the nerve-current. The one result, indeed, is in harmony with the other; for if contraction is counteracted by imparting power to the nerve-current, it is to be expected that contraction will be favored by detracting power from the nerve-current. And this result, moreover, is not at variance with the premises. For has it not been seen that ordinary contraction is coincident with the *discharge* of ordinary electricity, and with *weakening* of both nerve and muscular currents? And has it not been seen that rigor mortis is associated with absolute and permanent annihilation of the two last-named currents?

And if this be so—if in this manner the inverse current antagonizes, and the direct current favors, contraction—then it seems to be possible to apprehend, in some degree, why it is that contraction occurs alternately at the beginning of the direct, and at the end of the inverse, current.

When the *inverse current* passes, the influence upon the nerve-current is one which antagonizes contraction, and hence it is not to be wondered at that there should be no contraction at the beginning of the current; when the inverse current ceases to pass, there is an end of the influence which antagonized contraction, and contraction may therefore follow as an equally natural consequence. When, on the other hand, the *direct current* passes, the influence upon the nerve-current being one which favors contraction, the occurrence of contraction at the beginning of the current may be accounted for: when the direct current ceases to pass, the influence which favored contraction is at an end, and therefore the absence of contraction at this time is not to be wondered at.

(*c*) In the third period—that of single contraction—the muscular movements resulting from the action of a galvanic current upon nerve are at first sight somewhat perplexing, but with a little thought it may be seen that the same key will apply to their interpretation.

If, as has just be seen, contraction attends upon the beginning of the direct current because this current is found to favor contraction, it is not difficult to find a reason which will explain, not only why in the first period of double contraction the contraction at the beginning of the direct current is the strongest, but also why in the first part of the period at present under consideration—that of single contraction—: there should be contraction at the beginning of the direct current, and at this time only. Nor are the apparent irregularities in contraction—the "voltaic alternatives"—which occur in the latter part of this third period of single contraction entirely inexplicable; for it may be that these apparent irregularities—this apparent shifting of contraction from the beginning of the direct to the beginning of the inverse current, and so backward and forward once again—may be nothing more than the natural consequence of the changes which at this time have taken place, and are taking place, in the direction of the nerve-current.

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* A Treatise on Medical Electricity, p. 111. By Dr. Althaus. 8vo. Lond., 1859.

Looking back, then, at the arguments which have been advanced in the present section, there would seem to be little reason for supposing that any vital property of contractility has been called into action during contraction by the "stimulus" of electricity; for has it not appeared that rigor mortis is coincident with the utter extinction of the nerve and muscular currents?—that ordinary contraction is attended by weakening of these two currents?—that contraction attends upon the discharge of statical electricity? and that contraction is favored when the action of the galvanic current is to detract power from the nerve-current? Nay, has it not appeared that contraction is antagonized when the action of the galvanic current is found to impart power to the nerve-current? Looking back, indeed, it would seem as if muscular elongation was coincident with the presence of electrical action, and contraction with the absence of this action. In a word, it would seem as if muscular motion was nothing more than a physical process; for it is quite in accordance with what we know of the physical action of electricity that expansion should mark the impartation of this action, and that contraction should attend upon its abstraction.

It would seem, also, that this view of muscular motion under the action of electricity is one which tallies well with what has been already said concerning muscle under the action of nervous influence and blood. Indeed, knowing what we do of the action of electricity, and knowing also that the nerve-current is a component part of, and the only intelligible idea in, nervous influence, is there not some difficulty in supposing that nervous influence can do otherwise than counteract muscular contraction? And, with respect to the blood, is there not some ground for believing that this fluid must counteract contraction by keeping up those chemical changes in the muscle and nerve upon which the electrical currents of muscle and nerve may be supposed to be based? At any rate, the view of the action of electricity upon muscle, which has been advanced in the present section, is one which appears to support and explain the view already arrived at respecting the action of blood and nervous influence upon muscle.

IV. In constructing a theory of muscular motion, there are many facts which still remain to be considered, and some of which must not be left unexplained. How is it for example, that muscle undergoes no change of volume in contracting; that contraction is brought about by "mechanical irritation;" that muscle contracts with diminished power as it contracts upon itself; that the waste of muscle is proportionate to its contraction; and so on? Are these facts to be explained without the aid of a vital property of contractility and a doctrine of stimulation?

The fact that muscle contracts without undergoing any change in volume—the gain in breadth being precisely equal to the loss in length—has been often appealed to as an argument that the process of contraction is beyond the scope of any physical explanation; but, in point of fact, this change in muscle has its strict parallel in the change which passes over a bar of iron under the action of magnetism. The experiments of Mr. Joule* are quite conclusive upon the latter point. In one of these the bar of iron to be magnetized was placed in the axis of a coil of insulated copper wire. One end of this bar was fixed; the other end was attached to a system of levers by which any change in length was multiplied 3000 times. The bar itself was of rectangular iron wire, one-fourth of an inch broad, one-eighth of an inch thick; the coil was twenty-two inches in length, and one-third of an inch in diameter. On traversing the coil with a current capable of magnetizing the bar to saturation, or nearly so, the index of the multiplying apparatus sprang from its position, and vibrated about a point 1-10th of an inch in advance—a distance giving 1-30000th of an inch for the actual elongation of the bar. After a short interval the index ceased to vibrate, and began to advance gradually in consequence of the expansion of the bar under the heat radiating from the coil; and so it continued to do until the circuit was broken and the bar demagnetized, when it immediately vibrated about a point exactly 1-10th of an inch lower than that to which it had previously attained. In order to show that the bar underwent no change of volume in thus elongating, Mr. Joule placed a bar of annealed iron, one yard long and half an inch square, in a glass tube forty inches long, an inch and a half in diameter, and surrounded by a coiled conductor consisting of ten copper wires, each 1-20th of an inch in diameter and 110 yards in length. One extremity of this tube was closed; the other was fitted with a stopper, the centre of which was pierced with a graduated capillary tube, of which each division was equal to 1-4500000th part of the iron bar. This being done, the tube was filled with water, the stopper adjusted so as to force the water to a convenient height in the capillary tube, and the coil alternately connected and disconnected with a Daniell's battery of five or six cells—an apparatus of sufficient power to magnetize the iron bar to the full. This was the experiment. The result was, that no perceptible change occurred in the level of the fluid in the capillary tube, either on making or on breaking contact with the battery, and this equally whether the level was stationary, or whether it was rising or falling from any change of temperature accompanying the magnetization of the bar. The experiment, indeed, is one which affords most conclusive proof that the bar underwent no change of volume on being magnetized or demagnetized; for if the elongation of the bar which takes place on magnetization had not been accompanied by a corresponding loss in breadth, the water would have been forced through twenty divisions of the capillary tube whenever the circuit of the battery was completed.

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* Philosophical Magazine, February and April.

Under the influence of magnetism, therefore, there are changes in a bar of iron which are strictly parallel to those which take place in muscle; and this parallelism extends also to that point which is so characteristic of muscle—namely, the *suddenness* with which the contracted and elongated states may alternate one upon the other; for, in Mr. Joule's first experiment, the bar was seen and heard and felt to *jump suddenly* from the longer to the shorter form, or from the shorter back again to the longer, according as the electricity was communicated to, or withdrawn from, the coil.

Nor is a vital property of contractility at all necessary to explain the next fact—the contraction which is brought about by what is called "mechanical irritation." On the contrary, it is very possible that this phenomenon may be nothing more than the natural consequence of the mechanical interference with the electrical currents in nerve and muscle. It may be supposed, as in a previously related case. that a certain *interruption* in the nerve-current will be a result of the pressure which is implied when a nerve is subjected to "mechanical irritation;" and that, consequent upon this interruption, momentary currents will be induced in the nerve and in the neighborhood. It may be supposed, further, that the muscular fibres to which the nerve is distributed are the seat of some of the secondary currents thus induced, and that these fibres are thrown into a state of contraction by the disappearance of these currents. And so, also, when the muscular fibre is directly subjected to mechanical irritation, it may be supposed that there has been some interruption of the muscular current in the part pressed upon, that this interruption may give rise to momentary induced currents in the neighboring muscular fibre, and that the disappearance of these induced currents may similarly bring about contraction in the fibres included within the circuit of the currents. And, surely, after what has been said, it is easy to believe that the contractions referring to "mechanical irritation" are thus due to definite and intelligible changes in the nerve and muscular currents, as it is to ascribe them to an unintelligible "irritation" of a not very intelligible vital property of "irritability" in nerve and muscle.

Nor is the fact that muscle contracts with diminished power as the muscle contracts upon itself an argument that the law of muscular contraction is different from any known physical law of attraction. It is no doubt true, as M. Schawnn pointed out, that the force of muscular contraction decreases as the muscle contracts upon itself; but herein is surely no argument for asserting that the law of muscular contraction is essentially different from the law of all physical attractive forces! Indeed, elastic bodies, in shrinking after elongation, behave in every respect as muscle behaves in this experiment, and here undoubtedly the contraction is a physical process.

And, certainly, appeal cannot be made to the fact that the waste of a muscle is proportionate to the amount of muscular action, in order to show that muscular contraction is the sign of functional activity in the muscle; for, after what has been said, who shall say that this waste has not been incurred in restoring the relaxed state? At any rate, it is certain that the electrical condition of nerve and muscle, which, according to the premises, is connected with the state of relaxation, and not with the state of contraction, is one which cannot be kept up without a corresponding chemical change—that is, waste—in the tissues concerned.

What then, I ask, in conclusion, (for though much evidence remains behind there is no time to bring it forward) is the tenor of the preceding argument? Is it not this—that *elongation*, rather than contraction, is the chief peculiarity of muscle? Is it not this—that the transitory contractions, which are said to belong to that form of contractility which is called *irritability*, occur in transitory lulls of the action of certain agents, electrical and other; and that the persistent contraction of rigor mortis, which is referred to that form of contractility which is called *tonicity* derives its characteristic persistency from the fact that the actions which antagonized contraction during life are then at an end? And if so, what need is there of a vital property of contractility and of the doctrine of stimulation which is founded thereon?

Now it is, no doubt, a difficult matter to abandon an idea which has been so long fixed in the mind, as that which abscribes a vital property of contractility to muscle, and which supposes this property of contractility to be stimulated into action when the muscle contracts. It is difficult, I say, to believe that the final purpose of a muscle—its contraction, and particularly that form of contraction which is obedient to the mandates of the will—instead of being brought about by the infusion of more life into the muscle, is brought about by the induction of a change which is realized to its fullest extent in rigor mortis. But this difficulty, such as it is, is one which diminishes when it is steadily looked in the face. So far as the *will* is concerned, the theory under consideration requires one to suppose that voluntary muscular contraction is brought about, not by imparting something to the muscle, but by removing something from the muscle which had previously antagonized contraction. The idea changes with reference to the muscle, but not with reference to the vital activity of the will, for in either case and equally the will is a living acting power. And as to the rest, it is surely as easy to suppose that the will acts through the instrumentality of a force which must belong to muscle as a physical structure, as it is to suppose that it requires the superaddition of a vital property of contractility, and a special provision for stimulation. It is, I repeat, a difficult matter to abandon old views, and, turning round completely, to regard muscular contraction as a process which is most fully realized in rigor mortis ; but we have at least this advantage in so doing—that we gain an explanation which is physical and intelligible —an explanation, moreover, which applies to rigor mortis as well as to ordinary muscular contraction. For what is the case with respect to rigor mortis? The case is simply this : that as long as there is any sign of " irritability," or any trace of nerve-current or muscular current, so long is there no rigor mortis. If these signs and traces die out speedily, as in persons in whom the vitality of the frame has been exhausted by long life, or by chronic disease, such as consumption, the muscles become speedily rigid; if these signs and traces are slow in dying out, as in persons who have been cut down suddenly in the full glow of health, the muscles are equally slow in passing into the state of cadaveric rigidity. Once contracted, moreover, the muscles remain contracted until the supervention of putrefaction—an event which happens most speedily in the case where the muscles retain their physical integrity least perfectly. The facts, indeed, which are utterly unintelligible upon the hypothesis that contraction depends upon the stimulation of any vital property of contractility, are precisely what they ought to be according to the premises : for according to the premises, all that is necessary to the commencement of rigor mortis, is the dying out of that action in muscle and nerve, of which the electrical current is *one* of the signs ; and all that is necessary to its continuance is the absence of this action, and the physical integrity of the muscular structure. According to the premises, indeed, there is no difficulty in explaining the unexplained, and hitherto contradictory, characteristics of this form of muscular contraction ; and this being the case, it would seem that rigor mortis may be accepted as the type of muscular contraction in general, and as the *experimentum crucis* in favor of the theory of muscular motion of which I have had the honor of sketching the broader outlines in the present Lecture.

LECTURE II.

In my last lecture I endeavored to show, as far as was possible in the time, that it is necessary to adopt a new theory of muscular motion. I endeavored to show that a fundamental change in this matter is absolutely demanded by many of the facts which have come to light during the past ten or twelve years, and chiefly by the messages which may be said to have been telegraphed along the three miles of wire which enter into the coil of a galvanometer, such as that which was then upon the table. For what are these messages? One is, that there are *electrical currrents in living muscle and nerve*. Another is, that rigor mortis does not occur until the *final extinction of these currents*. A third is, that *these currents are weakened in ordinary muscular contraction*. A fourth is, that *contraction is produced when the nerve-current is weakened by the action of a galvanic current upon nerve*. A fifth is, that *contraction is not produced when the nerve-current is strengthened by the action of a galvanic current upon nerve*. In a word, the needle of the galvanometer appears to show that muscle elongates under the action of the muscular and nerve currents, and that muscle contracts when this action is weakened or extinguished.

I pointed out also, as in keeping with these facts, that muscular contraction is connected with the *discharge* of ordinary electricity, and not with the charging or charge.

I endeavored to show, further, that there are no sound reasons for supposing that blood and nervous influence produce contraction by acting as stimuli to a vital property of contractility, and that there are many grounds for believing that these agents act upon muscle in the same way as electricity, antagonizing contraction, not causing it—antagonizing contraction, possibly, by means of electricity—nervous influence by the nerve-current—blood, by keeping up the muscular and nerve-currents, for it is easy to suppose that these currents may be kept up by the respiratory or *chemical* changes which are produced by blood in muscle and nerve.

As to the rest, I endeavored to show that there was no need of a vital property of contractility, and of the doctrine of stimulation founded thereon, to explain certain other facts which must be accounted for by any true theory of muscular motion. I endeavored to show, for instance, that the fact of muscle undergoing no change of bulk in contracting, the gain in breadth being precisely equal to the loss in length, has its exact parallel in the change which a bar of iron undergoes in passing out of the magnetic state—that contraction under "mechanical irritation" may be nothing more than the natural effect of the discharge of secondary currents, which currents are induced by mechanically interrupting the nerve and muscular currents ;—that muscular waste is proportionate to muscular action, not because contraction is the sign of functional activity, but because a given amount of waste is necessarily incurred in that renewal of the muscular current which is necessary to relax the muscle after each contraction—that the will may *act* in voluntary contraction by suspending the muscular and nerve-currents ; that rigor mortis, which is utterly unintelligible on the accepted theory of muscular motion, may be the natural result of the action of the common molecular attraction of the muscular tissue upon the final dying out of the muscular and nerve-currents.

To bring forward all the arguments belonging to so comprehensive a subject within the space of one lecture was manifestly impossible, even with the additional moments which you, Sir, so graciously placed at my disposal ; and thus I was obliged to leave much unsaid. I said nothing, for instance, about the rhythmical movement of the heart and other muscles, though I might have found in the theory a key to their physical interpretation, and in them no small confirmation of the theory. I said nothing about the parturient contractions of the uterus, though in the theory I might have hoped to have found a way of explaining how it is that these contractions begin at a certain time, and continue until the completion of birth. But though obliged to leave much unsaid, I hope I was able to say enough to show that a fundamental change is necessary in the theory of muscular motion, and to prepare the way for what I have now to say upon the theory of convulsive diseases.

Epilepsy is at once the great type of convulsive diseases, and the key to their interpretation. Epilepsy, however, is a name which indicates much less than it did formerly. Thus, it does not indicate the epileptiform convulsion which is connected with certain positive diseases of the brain, with fever, with uræmia and other retained excretions, with "irritation" in the gums and elsewhere, or with the moribund state. And it is difficult to say precisely what it does indicate; for, as our diagnosis gains in exactness, epilepsy changes from a special malady into a mere symptom, or congeries of symptoms. At the same time, it is convenient to take an ideal type of epilepsy, and regard it as a special malady; for there are numberless cases, in which, in their earlier stages at least, it is very difficult, if not impossible, to recognise the disease of which the convulsion is merely a symptom.

What, then, I would begin by asking, is the theory of simple epilepsy? Upon which theory of muscular motion is it to be based? And, first, what are the facts?

An epileptic will often say—never oftener than upon the very eve of an attack—"I am quite well," and many are ready enough to echo what he says; but he and they have little right to say so. Where the malady has not made much progress, there may be a cheerful countenance, a sharp digestion, a firm limb, and at the first glance it may not be easy to say what is wrong; but, even in this case, there are always certain features which are incompatible with true health and strength. In many instances there is a want of fire in the countenance, and a dilated and sluggish state of the pupil, which point to the brain as lacking in energy; and, in keeping with these signs, it is found on inquiry that the memory is more or less treacherous, the ideas more or less indefinite, the powers of attention more or less incapable, the imagination more or less dull, the temper more or less irritable, the will more or less feeble, the character more or less undecided. It is, no doubt, common enough to meet with epileptics, who, without any want of candor on their part, will maintain that their minds are free from all infirmity; but if care be taken to examine their history, it will always be found that they and their friends have very different opinions upon this point.

In very many instances there is a marked disposition to tremulousness and cramp; thus in upwards of seventy cases which fell under the notice of my friend and colleague, Dr. Reynolds, these symptoms occurred at one time or other, and in one form or other, in more than half of the whole number.

In very many instances, again, if not in all, the hands and feet are cool or cold, the pulse is weak and slow, and a feeling of chilliness is almost habitual. Indeed, so far as my own experience extends, the powers of the circulation are always very defective *in ordinary epilepsy*.

In confirmed cases, these general features are so marked as to be altogether unmistakable. Not only are the pupils dilated and sluggish, but the under eyelids have become puffy and coarse. Often, moreover, the complexion has acquired a dull tinge—a change which appears to depend in part upon an habitually bloodshot state of the skin. At any rate, this bloodshot condition is rarely absent, and where it is most marked, as about the forehead and eyelids, it is often accompanied by numerous spots of ecchymosis of about the size of a pin's head. The torpid features are now rarely lighted up with the fire of feeling or thought, the senses are duller than ever, the memory more treacherous, the ideas more confused, the power of attention more distracted, the imagination more drowsy, the temper more uneven, and the will more incapable. At this time, also, there is, for the most part, little of that fine susceptibility of feeling which is necessary to enable one to be miserable about anything.

This change for the worse is particularly marked after the fit. Indeed, at this time the senses may be so blunted, and the mind so clouded and confused, that the features of the epileptic may become blended in those of the demented person. Or symptoms of mental aberration may show themselves, and transform the epileptic for the time into the lunatic. The fits, also, may recur so frequently, that the mind may never have the chance of clearing up in the interval, and in this way the general features of the convulsive malady may never cease to be confounded with those of dementia or insanity. Not unfrequently, also, there is the gravest degree of mental infirmity from the very first, and instead of ending in dementia the history of the epileptic may begin in idiocy. Indeed, epilepsy is so frequent an accompaniment of this saddest of all conditions, that it can scarcely be said to be an accident.

The signs of the approaching paroxysm are very variable. The patient himself will generally say, and say truly, that the fit takes him by surprise; and certainly the signs of danger are not those which are likely to arrest his attention. These signs also are very apt to vary in the same person.

As the time of danger approaches, the patient may become unusually fidgety, irritable, moody, forgetful, absent, or drowsy; or he may sleep restlessly, grinding his teeth, snoring or snorting, dreaming about things which distress or terrify him, or even somnambulizing; or he may have a disagreeable feeling of tightness about the throat, with cramps or tinglings in the limbs and elsewhere; or he may be unusually "shaky," or he may be annoyed with shudderings of of a very disagreeable and violent character.

Another sign of danger may be giddiness or headache; but, so far as the latter symptom is concerned, I should not be disposed to lay much stress upon it as a warning in simple epilepsy.

Occasionally, the pupils may be more dilated and sluggish than usual, or one pupil may be more dilated and sluggish than the other; or the eyes may be rotated in a peculiar manner.

Usually, so far as my experience goes, the pulse may become feebler than it was before; and not unfrequently the patient will complain that nothing will warm him or keep him warm; or he may sigh in a way which shows that he is not breathing as freely as he ought to do; or, if asleep, the breathing may at times become so imperceptible and insufficient as to suggest the idea of death. The breathing fails in this remarkable manner before the fit in a patient at present under the joint care of a medical practitioner in the country and of myself, and we can both testify as to the fact.

Later still, there may be certain vague and undefinable sensations or movements, very varying in their character, but all comprehended under the term *aura*—sensations of pain, numbness, tingling, and a feeling as of cold vapor, movements of shuddering or spasm, beginning in a distant part, as in the hand or foot, and travelling towards the head. In other words, there may be symptoms which, as Dr. Watson thinks, are in some degree analogous to *globus* in hysteria, or to the numb and tingling feelings which are the precursors of paralysis and apoplexy.

In some cases there may be special premonitions. In one of my patients, the fit is invariably preceded by an intense feeling of hunger. In another patient, since insane, a little blue imp made its appearance, and grinned and mocked at him as he lost his consciousness. In a third, a guitar seemed to be roughly grated close to the ear. But these signs are of little value, for they are only perceptible to the patient, and not even to him until he has ceased to be able to bestir himself.

Last of all, there is a sign which is very difficult to catch, and this is the death-like pallor which overspreads the countenance immediately before the fall. M. Trousseau called attention to this sign five years ago as one which is diagnostic of epilepsy; and, since that time, I have seen it in every instance in which I have seen the fit from the very beginning. "Il est une signe," says M. Trousseau, "qui se produit du moment de la chute, et qui n'est imitable pour personne; c'est la pâleur très prononcée, cadavérique, qui couvre pour un instant la face de l'épileptive. Nous ne le voyons pas, parceque nous arrivons toujours trop tard, alors que la face est dejà d'une rouge trés prononcé." M. Delasiauve has also noticed the same phenomena in several cases.

In the severest and most characteristic form of the paroxysm, the patient utters a peculiar choking noise, or a sudden and startling cry, and at once falls down convulsed and insensible. The convulsions are usually more marked on one side of the body than the other. They drag the mouth towards the side which is most affected, and twist the face in the opposite direction until the chin may press upon the shoulder. They push forward the tongue, and crush it between the teeth. They clasp the thumb upon the palm, and hold it down with the force of a giant. They seize the walls of the chest and abdomen, and prevent the possibility of breathing. They stiffen the limbs, so that the joints cannot be bent without some risk of breaking the bones. In some instances, they even take hold of the bladder, the bowel, or the seminal vesicles, and expel the contents; in others they may be so violent as to bite off a large portion of the tongue, to break the teeth, or to dislocate a limb. At first, it seems as if the spasms would never relax; but afterwards they are separated by intervals, which grow wider and wider as the paroxysm draws to an end. The convulsions, that is to say, are tetanoid at first—clonic afterwards.

At the instant of the fall, a corpse-like paleness overspreads the countenance; a few instants later, and the livid, black, and bloated head and neck, and the hissing, gurgling, choking sounds proceeding from the throat, suggest the idea of a person struggling under the bowstring of some invisible executioner. At times, however, the signs of suffocation are absent, and the ghastly pallor of the beginning remains throughout.

When the fit is at its height, a quantity of frothy saliva is usually blown or puffed from the mouth, and this is not unfrequently reddened with blood, if the tongue or cheek happens to have been bitten.

If the eyelids are open, the eye is seen to be projected and distorted, with the pupil dilated to the utmost, and absolutely insensible to light. As a rule, however, the eyelids would seem to be closed; and well it is that they are so, for it requires some nerve to meet the hideous stare of the epileptic eye.

All this while, it is usual for the hands and feet to be cool, and bedewed with clammy perspiration. Except the head and neck, indeed, the whole body is cooler than natural, and any little additional warmness of the head and neck would seem to be simply due to the fact that their vessels are more distended with venous blood.

The other and less obvious features of the paroxysm are in keeping with these.

At first, it may be difficult, perhaps impossible, to feel the pulse, and the heart acts very feebly; but if the fingers of one hand be kept upon the wrist, and the other hand be placed upon the bosom, it is found that the pulse rapidly acquires a force and fulness which it never had in the intervals between the fits, and that the heart beats more and more tumultuously and violently as the pulse rises. In some instances, however, the pulse may remain almost silent, and the action of the heart be extremely feeble from the beginning to the end.

From the first all consciousness is happily suspended—this is our only consolation in so sad a spectacle—and the most powerful stimulants fail to evoke any sign of action in the dormant mind. The water which may be poured upon the face (with few exceptions) causes no blinking in the eye if this be open and staring; the fire upon which the patient may have fallen may char the flesh without causing a single pang.

After continuing for two or three minutes, which seem drawn out to hours, the convulsions cease, and the patient is left with all his muscles unstrung, like a person dead-drunk, or struck down by apoplexy. The lungs, no longer restrained by the suffocating spasm of the earlier part of the fit, resume their play with deep inspirations, and then act with loud and stertorous breathings; and as the respiration rights itself, the veins of the head and neck become unloaded, the natural color returns to the surface, and presently the patient wakes to an obscured and troubled consciousness. "Je suis brisé," Calmeil tells us were very often the first words of the returning epileptic at the Saltpêtrière or Charenton. The time during which the patient lies after a fit before awaking is very variable, but (except in a first attack) it is rarely more than half an hour, and it may not be more than two or three minutes.

This is the usual, but by no means the invariable, course of the fit. Often, indeed, the attempts at rallying may be very imperfect, and fit after fit may recur for a long period without any interval of waking; and occasionally all rallying may be prevented by death.

After waking, there are generally some symptoms of reaction in the circulation, but in simple epilepsy these are never marked. They may be enough to give a dull flush to the cheek and a little fulness to the pulse for a short time after the patient wakes; but, as a rule, they cease when the coma ceases, and coma is never much prolonged in simple epilepsy. Usually the patient is headachy and exhausted, listless and stunned, moody and irritable, until a night's rest has enabled him to recover the balance of his shaken nervous system. The jaded countenance also tells plainly of the past struggle, even though it may present none of those numerous and minute dots of ecchymosis about the eyelids and upon the forehead which are such unequivocal signs of a severe attack of epilepsy.

As time goes on, the mental faculties recover more and more imperfectly, and more and more tardily, and at last their habitual state may be one of pitiful fatuity from which no single ray of the Divine principle beams forth. Or the moodiness and irritability which often follow attacks may become more and more marked, until at last they merge into attacks of downright mania. Or symptoms of paralysis may make their appearance. Or death may happen in a fit, or shortly afterwards. The natural tendency of epilepsy is assuredly towards dementia; and dementia is the frequent doom of the epileptic, if his disorder be unchecked and life prolonged sufficiently; but at the same time it is possible for an epileptic to live many years, and to have many fits, without losing the powers which are necessary to render him an agreeable and serviceable member of society. When death happens, it appears to be, most generally, from exhaustion in the period of prostration immediately folling the paroxysm.

But the symptoms of epilepsy are not always so startling as have been represented, and in some instances they may be so softened down as to be recognised with difficulty.

In the slightest form of the malady, the patient pauses suddenly in the midst of anything he may happen to be doing or saying at the time, his countenance becomes pale and blank, his lungs cease to play, and, after a moment of absence or giddiness, he is himself again. His memory has kept no record of this sad passage in his history, and if it had escaped the notice of others he might remain in happy ignorance of it. Or, in addition to these symptoms, a lurid flush may succeed to the paleness of the countenance the veins of the neck and forehead may start out in prominent relief, the face may turn slightly towards one of the shoulders, and there may be some convulsive twitching in the face and neck and arms. In such a case there is no scream or cry, no fall, no bitten tongue, no foam at the mouth, and at most there is only some obscure gurgling in the throat, some staggering, and some slight moistening of the lips with saliva. In such a case the convulsive movements are very partial, rarely extending beyond the face, neck, or arms, but in some few instances the whole frame may be agitated by one or two violent convulsive shocks. This state of giddiness and absence and partial spasm may be followed by fatigue, loss of memory, confusion of thought, depression of spirits, or irritability of temper, and at times it may end in drowsiness or actual sleep; but usually recovery is almost instantaneous. At the same time there is reason to believe that dementia is a more likely as well as a more speedy consequence in this, *le petit mal*, than in ordinary epilepsy, *le grand mal.*

In some of these cases, moreover, it would seem not only that the patient does not cry, or fall, or suffer from general convulsion, but that the state of intellectual eclipse—the most characteristic symptom of epilepsy—is far from complete. Esquirol says, "il est des accès dans lesquels on n'observe pas la perte de connaissance;" and M. Herpin directs particular attention to these cases. Cases like these are common enough in certain chronic diseases of the brain, as meningitis or tumour; but in simple epilepsy they are by no means common, if other proof be wanting than the mere assertion of the patient. I have met with four such cases, and have put them on record in various places.

The morbid appearances after death from simple epilepsy are necessarily very obscure, if the case have really been one of simple epilepsy, and not one of epileptiform convulsion connected with some special disease. In cases fatal during the fit the brain has been found to be congested; but this appearance is clearly owing to the mode of death, and it is allowed to be so. In cases, again, where epilepsy has been complicated with insanity, the brain or its membranes may present various signs of inflammation, or of changes more or less akin to inflammation; but these signs are clearly referable to the mental disorder, and for no other reason than this—that they are as common, or more common, in insanity without epilepsy. In other cases there are signs of degeneracy, such as pallor of the grey matter, softening, induration, atrophy, dropsical effusion; but these are the very signs which belong to the demented state. It is this very fact, however, which furnishes some grounds for supposing that signs of this character may have something to do with epilepsy. It does so, because the demented state is intimately connected with convulsive disorder; for if a demented person be not epileptic, he is almost sure to be affected with palsied shakings, or cramps, or spasms, in one form or another. In other cases, again, the skull may be thicker and heavier then usual, and the several internal projections—as the clinoid processes—may be considerably developed, or various parts of the dura mater may be converted into bone. Indeed, there are no constant changes in the brain proper or its coverings—not even that change in the pituitary body of which so much has been said by Wenzel; for, writing of it, Rokitansky says that he has "frequently failed to discover it in those who had notoriously suffered from epilepsy and convulsions," and that he has "met with it in others who were thoroughly healthy." It is in the medulla oblongata, indeed, that we alone meet with any appearances after death which can be regarded as constant. In early cases of epilepsy, it is true, we may fail to find anything characteristic even here; but in confirmed cases the medulla oblongata is often harder than natural, from the interstitial deposit of a minutely granular albuminous matter, or else softened, swollen, and presenting evident signs of fatty degeneration. Professor Van der Kolk, who was the first to detect these appearances, has also detected some marked changes in the bloodvessels of the part, and to these changes he directs particular attention. He has examined fifteen epileptics after death, and in them all the posterior half of the medulla oblongata, on making a transverse section, was found to be redder and more hyperæmic than it ought to be; and this was the case whether death happened in an attack or not. On more minute examination, he found the bloodvessels dilated to thrice their natural dimensions, and their walls much thickened. And on comparing the medulla oblongata of several epileptics who bit their tongue, with the medulla oblongata of other epileptics who did not bite their tongue, he found (what is a very curious fact) that the capillaries were especially dilated in the course of the hypoglossus and the corpus olivare in the former case, where the tongue was bitten in the fit, and in the course of the roots of the vagus in the latter case, where the tongue was not bitten in the fit. These discoveries of Professor Van der Kolk are the most recent as as well as the most important facts in connexion with the post-mortem appearances of epilepsy.

Enormous Hypertrophy of the Spleen—M. Sappey lately showed to the Biological Society of Paris a spleen which had reached the following dimensions: length, 13 inches; breadth, 9 inches; thickness, 5 inches. The total weight was 14lb. 4 oz. By taking the average of ten normal spleens, the author has found that the ordinary weight is 6 1-2 oz. M. Sappey thinks that the spleen here spoken of is the largest on record, and adds that those mentioned by authors as having reached 15, 18, 20, and even 43 pounds in weight, were not simply hypertrophied, but were cancerous or cartilaginous, &c.

Original Papers.

ON THE
INFLUENCE OF TROPICAL CLIMATES
ON THE
RISE, PROGRESS, AND TREATMENT OF UTERINE INFLAMMATION.

By Edward John Tilt, M.D., M.R.C.P.L.,
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(Continued from April No. page 302.)

It would be very erroneous to suppose that uterine diseases were the result of an over-refined state of civilization; they have been found to be of frequent occurrence amongst the unirritable women of uncivilized races by those who have been placed in favorable circumstances of observation. This statement is confirmed by my friend Dr. Stewart, late Professor of Midwifery in the Medical College of Calcutta, and Physician to the Hospital for Native Women, who was forcibly struck by the frequency of uterine diseases amongst the natives of India of both high and low caste. Another friend, Dr. Kirkman Finlay, Superintendent of the Hospital in Trinidad, likewise assures me that in that island the native women are never without suffering from some form or other of uterine disease, and the French creoles aptly indicate their chief cause of suffering by calling it "Mal de mère."

Although I shall again refer to the probable causes of uterine inflammation amongst the natives of tropical climates, the object of this communication is to investigate the influence of a tropical residence in the production of uterine inflammation amongst our countrywomen; and I intend to limit my remarks to the several varieties of inflammation of the body and neck of the womb, and to such uterine enlargements and displacements of the womb as are often the result of inflammatory action.

In estimating the comparative frequency of uterine inflammation in the European residents of tropical climates, we must bear in mind that, whether in India or in our other tropical possessions, European women are all young; they leave Great Britain at about twenty, and very seldom remain in India after forty, thus passing in a hot climate the period of life in which uterine inflammation is most common even in temperate regions. This remark is made as a safeguard against exaggeration, but I am fully prepared to admit, with those who have practised in tropical countries, that during their residence there, Europeans are unusually prone to uterine disease. Dr. Stewart does not hesitate to say, that in India, eight out of ten of the European female residents are habitually subject to deranged menstruation, leucorrhœa, or to cervical excoriations.

Without having practised in tropical climates, I think I may usefully enter upon this investigation, because I have frequently had under my care, during the last ten years, patients invalided by uterine inflammation in the East or West Indies, China, Australia, or the Brazils; for these different climates may be considered to favor the development of uterine disease in the same way, however different may be their pathology in many other respects. In addition to this favorable opportunity of studying the influence of tropical residence on the rise and progress of uterine disease, my intimacy with Dr. Henry Bennet has made available to me his large experience and correct views on this interesting subject, so that this communication may to a great extent be considered as representing his views as well as my own.

This subject has not received due consideration in any work with which I am acquainted; so I deem it useful to submit my views to the medical profession, and to bring the subject under the attention of those who are practising in India and in our numerous tropical possessions, in order that they may fill up the deficiencies of my imperfect sketch. The following questions will be briefly considered :—

1stly. Why do tropical climates increase the frequency of uterine inflammation amongst those born in temperate regions?

2ndly. What is the influence of tropical climates on the march and progress of uterine inflammation both before and after the patient's return to a temperate region?

3rdly. Does the treatment of uterine inflammation require to be modified by the peculiar morbid conditions of those who return from a tropical to a temperate climate?

4thly. Why do tropical climates increase the frequency of uterine inflammation amongst those born in temperate regions?

Firstly,—Why do tropical climates increase the frequency of uterine inflammation in those born in temperate climates? To give a satisfactory answer to this question, it will be well to state the probable causes of uterine disease amongst the native races of tropical countries. One cause is the calling into action the sexual system long before its full development. In India this is the result of a positive religious injunction, and in other tropical countries an equally early indulgence in venery often occurs, on the first impulse of passion, amongst races unrestrained by social position and the dictates of morality; or rather, no matter the latitude, wherever woman is but a plaything in the hands of degraded savages.[*]

The great liability to abortion, accidentally and often intentionally brought on; the barbarous handling of unskilful midwives; the too early rising from the puerperal couch; the want of cleanliness in some races, and in all the sudden action of cold;—these are the principal causes of uterine disease amongst the native races, and we shall be able to trace the action of some of these influences in developing uterine disease amongst the European residents.

When we intend a plant to thrive in a soil different from that in which it had grown, we not only remove it carefully, but we leave it for a time in undisturbed repose, to take root in its new habitation. There is, however, no such healthful period of repose for our young countrywomen who are transplanted from England to India. Even when the menstrual function has been habitually regular, it is disturbed by the sea voyage, and is not allowed to become regular before these emigrants of the upper ten thousand are launched, often for the first time, into the gaieties and fatigues of society. In the midst of the excitement caused by this sudden introduction to a strange country and a new position, they generally marry, sometimes at too early an age, often before the catamenial function has become regular. Unaccustomed to bear almost intolerable heat, they naturally enough often expose themselves in slender garments, saturated with perspiration, to the sea-breeze or cold north-wester. They cannot live in India, or in any other tropical climate, without being subject to those abdominal disorders which tend to induce uterine disease. The "country fever" will assail them from time to time, lighting up inflammation in the weakest organ; and, before long, the colorless lips and sallow cheeks denote that the blood of the English girl has been deteriorated, and that she suffers from that anæmia which, even in a temperate zone, often stands related to inflammation of the womb, either as cause or effect. The muscular inactivity to which they are condemned, the unusually abundant losses of blood occurring during menstruation and after abortion and parturition, increase the anæmia, and explain that deep-rooted debility[*] which can only be removed by the bracing influences of a prolonged sojourn in a temperate climate. These are the conditions which explain the valetudinarian existence of European women in tropical climates, and the frequency of uterine disease; and after thus sketching the causes of this frequency, I shall now explain more fully the action of some of these causes.

Starting from daily experience, one may affirm that the greatest predisposing cause of uterine inflammatory affections is some defective organization of the ovario-uterine organs, causing menstruation to be habitually morbid; so much so, that when the menstrual flow is habitually too abundant or too scanty, and also painful and irregular in its periodical returns, one may safely infer a tendency to uterine inflammatory affections. In like manner, whenever inflammation of the womb occurs in the virgin, one may safely predicate that menstruation has been habitually morbid; whereas, in the married, this predisposing cause increases the liability to the acute or chronic forms of uterine inflammation under the influence of well-known causes.

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[*] "Esquimaux women marry and live with their husbands long before they become menstruated."—Dr. Richard King's replies to the author's questions.

"Amongst the aborigines of South Australia, girls are betrothed and live with their husbands from eight to twelve years of age. They practise sexual intercourse from the eighth year upwards. Childbearing commences at about sixteen years of age, when girls cease to be public property, and live quietly with their husbands."—The Colonial Surgeon's (Mr. James Hersbash) replies to the author's questions.

[*] My friend Dr. Dundas, who was for twenty-three years medical superintendent of the British Hospital at Bahia, believes that European women feel the depressing effects of warm climates more than men and he attributes the difference to the greater indolence of the habits adopted by the female residents.

I gather from the writings of those who have practised in tropical climates that when women are transplanted there from temperate regions, habitual perturbations of the menstrual function may be expected, even in those in whom that function had been previously regular. And I know, from careful inquiry into the constitutional antecedents of my patients, that menstruation, when morbid in England, becomes more so in India, or in any other tropical climate;* and I may add that this statement is confirmed by those who have investigated uterine disease in tropical regions, according to the means so judiciously and successfully advocated by Dr. H. Bennet in his published works.

The broad fact is thus brought out that tropical climates produce uterine inflammation, because habitually intense heat disturbs menstruation in those who were not born under tropical influences; so that, for instance, our countrywomen, when transplanted into India, become more liable to inflammation of the womb, as a result of pregnancy, abortion,† and parturition, than if they had remained in England.

That a tropical climate should be productive of uterine inflammation, in those brought up in temperate regions, is also dependent on the fact, that the pathology of tropical climates is essentially *abdominal*. Tropical heat increases the activity of the portal system, rendering all abdominal inflammatory affections more frequent and dangerous. In my work "On Diseases of Women," I have shown that the womb and bowels are so intimately connected, by nerves and bloodvessels, that menstruation seldom takes place without disturbing the functions of the bowels, confining them sometimes, but relaxing them in general. I pointed out that diarrhœa is sometimes a symptom of pregnancy, and that severe uterine inflammation generally gives rise either to obstinate constipation or to diarrhœa, and other functional disorders of the large intestine and of the rectum; so one is prepared to understand how it is that in India, for instance, diarrhœa is a more frequent symptom of pregnancy than it is in temperate countries, and that dysentery often complicates pregnancy inducing abortion, either directly or by the treatment necessary for the cure of the intestinal affection, and is thus one of the most frequent causes of death during pregnancy and shortly after delivery. In like manner diarrhœa and chronic dysentery are frequently met with as causes, concomitant or sequential, of uterine disease in those who have taken up their abodes in Eastern latitudes. In like manner, at the native hospital in Calcutta, Dr. Stewart has repeatedly demonstrated to his pupils, by means of the speculum, that cases admitted as dysentery were due to extensive ulceration of the neck of the womb reacting on the rectum.

Another cause of the unusual frequency of uterine inflammation of the womb, in tropical regions, is certainly to be found in that deteriorated state of the blood to be seen in variable shades of anæmia, and explaining that deep-rooted debility brought on by a more or less prolonged residence in a hot climate, even when the transplantation has been well borne by the European. This debility is not only caused by the physical effects of habitually intense heat, but by the forced inactivity of the muscular system, by the want of the usually sound sleep, and by that complete change of habits which soon imparts a certain amount of oriental indolence to the once hardy Englishwoman. It is well known that this settled debility renders the more important viscera very liable to subacute inflammation; and there is no reason why the womb should escape this influence, and why it should not be then more forcibly acted on by its usual exciting causes of inflammation.

Whether the ill effects of the sudden application of cold to the external surface depends on its checking the cutaneous secretions, or on its disturbing the sympathetic relations which exist between the cutaneous nerves and internal organs, or by altering that electrical status of the system, with which we are as yet so little acquainted, it is difficult to say; but one thing is certain, that the sudden application of cold, particularly raw, damp cold, is the most frequent cause of menstrual perturbations and of uterine disease, in every country, whether it be cold,* temperate, or tropical. Indeed, to its action, on frames debilitated by tropical heat, Dr. Johnson and Mr. R. Martin attribute most of the diseases of Europeans in India. Living in a temperature which, even in the shade, equals, and often surpasses, that of the blood, it is easy to understand that women will seek relief by exposing themselves imprudently to the sea-breeze, to the cold land wind, or to the icy chill of a raw, dewy night, which is felt to pierce and constringe the frame, inadequately protected by scanty clothing, saturated by perspiration; and I may remark that the loose and ample folds of the trowsers worn by the women of many eastern nations are much more calculated to prevent the injurious action of cold on the pelvic viscera than the ordinary European costume.

Even the greatest preservative of health in a warm climate, the cold bath, may be abused; and my friend Dr. Stewart has sometimes traced uterine diseases to its having been imprudently continued during the catamenial periods. Thus cold, under its many modes of application, tells most on the weakest organ, originating uterine disease in India, as it does in England.

I do not include amongst the causes of uterine disease that increased desire for sexual intercourse attributed to those who live under a burning sun, for I believe the assertion to be one of those bold assumptions, made to fit a theory, by those who forget that, according to the accounts of Arctic travellers, nothing can equal the salaciousness of the savage tribes, whose burning passions contrast strangely with their ever-frozen habitations.

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* "Dysmenorrhœa and suppression of the menstrual flow is common in Demerara, as a result of tertian intermittents."—Returns to the author's questions from Dr. Alleyne, late Colonial Surgeon, Demerara.

† Miscarriages are more frequent among the European residents in India during the hot season, and recovery is more protracted.—Johnson and R. Martin on Tropical Climates.

* "Suppression of menstruation is, perhaps, nowhere so common as in the Feroe Islands It appears that the nature of the soil is such as to permit women to move about without shoes, and with only a skin wound round the feet, so that the feet are always damp and cold."—Returns to the author's questions from Dr. Ravn, of Copenhagen.

In the preceding communications I pointed out the principal reasons which rendered European women unusually liable to uterine disease during a prolonged sojourn in tropical countries. Taking India as an example, I explained that even if the menstrual function had been previously regular in young women going out to India, it became irregular from traveling and the sea voyage; that without passing through a period of repose, on arriving in India, and before the menstrual function had had time to "right itself," these emigrants of the "upper ten thousand" were launched into the fatigues and gaieties of society, often marrying at too early an age, and even before menstruation had become regular. I observed that, little accustomed to the heat of India, the inexperienced European often imprudently exposed herself, during the menstrual period, to the raw, chilly night air, or to the north-wester, or made too frequent a use of cold water at that time. The pathology of tropical climates was represented as being principally abdominal, Europeans becoming occasionally subject to liver disease and dysentery, which tend to produce uterine inflammation even when they occur in temperate climates. The frequent liability of the European to some form of intermittent or remittent fever was insisted on, as well as the fact that these affections sought out the weakest organ, increasing its tendency to congestion and inflammation. Another cause of uterine inflammation was found in that anæmia and intense debility which usually follow a prolonged residence in a tropical climate.

Proceeding with our inquiry, we come to another question: Secondly,—What influence have tropical climates on the march of inflammatory affections of the womb, both before and after a patient's return to a temperate abode?

From what I have been able to observe, I believe that both acute and chronic inflammation of the womb tell more forcibly on European women when residing in a hot climate, than if suffering from the same complaint in their native country. The muco-purulent discharge and the loss of blood are more considerable both in India, and after returning to Europe; the nervous symptoms more severe and eccentric; debility and prostration of nerve-force are more intense, and felt at an earlier stage of the complaint. Such are the results of my observation, and they harmonize with what might have been anticipated; for, supposing uterine inflammation to have become established in the European resident in tropical climates, from the action of the causes which I have enumerated, it stands to reason that the progress of the complaint will be accelerated by the frequently recurring action of the same causes. The march of uterine inflammation will be made more rapid by the gastro-intestinal affections which are so common. The various forms of remittent and intermittent fevers, which constitute the "common fever" of each tropical zone, cannot be avoided, and we know that these affections single out the weakest organ, and will for a time give an additional impulse to the uterine inflammation; while the ever-persistent action of intense heat increases that radical debility which fosters local congestions and subacute inflammations. Supposing the disease be met by the most judicious combination of constitutional and local measures, they will only be partially successful so long as the patient remains subject to these climatorial conditions; indeed, practitioners assert that, in India, steel and tonics produce so much nervous irritability in women, that their exhibition cannot be continued, however well indicated by theory. Dr. John Jackson, formerly physician to the Medical College Hospital in Calcutta, and Dr. Stewart inform me that, in India,* steel has a tendency to increase uterine congestion, unless it be associated with aperients, which increase the uterine disease by irritating the bowels. They admit, however, that in those anæmic or toxæmic conditions induced by agues, menorrhagia, and other causes, when the lips are colorless and the blood is cold, steel, in some form or other, is absolutely necessary; the best and least exciting form being the syrup of iodide of iron. If the uterine disease remain undetected or without adequate treatment, it is thus more likely to become worse in a given time, than if the same patient had remained without treatment in a temperate climate.

Under these circumstances the patients are generally invalided, but they return home with constitutions very much recruited, particularly if, instead of taking the more expeditious but fatiguing overland route, they patiently submit themselves to the steady action of the sea during the long voyage round the Cape.

This improvement in the general health does not always tell very favorably on the uterine disease, which seems to be sometimes aggravated by the return to a colder climate. My observation in this respect, coincides with what has been noticed by Dr. J. Johnson and Mr. Ranald Martin with regard to the aggravating effects of a return home on other diseases; for, however plastic may be the powers of the system, it cannot immediately accommodate itself to a sudden change of climate. The constitution is so debilitated by tropical influences that a return to a cold climate may cause a renewal of morbid activity on the part of a previously inflamed organ, be it womb or liver.

Before mentioning the conditions in which I have found my patients on their return home, I may remark, that inflammatory diseases seem to present the same appearances, whatever be the patient's clime and race. Thus Dr. Stewart, in his wide field of observation at Calcutta, Dr. Scott, who was for many years the chief medical officer of the Madras Hospital for Diseases of Native Women, and some of the regularly educated Hindoo practitioners, tells us, that whether it be studied at the bed-side or in the dissecting room, uterine inflammation presents the same appearances in the Hindoo as in the European; and I have noted nothing peculiar in the pathological aspect of the inflamed uterine tissues in our countrywomen who return to England from tropical climates. The local appearances are the same, but more marked, considering the length of time the disease has lasted. In like manner, the symptoms are often worse than one would have anticipated from the duration of the complaint.

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* Ferruginous preparations seem to have a similar mode of action in the West Indies; for Dr. Kirkman Finlay mentions to me that in Trinidad, he has often seen the first doses of some preparation of steel act as an emmenagogue.

Having pointed out that the progress of uterine inflammation in tropical climates is accelerated by the frequent recurrence of complicating diseases, it remains to be shown that, in attending the uterine affections of those who have returned home from tropical climates, we are liable to find our treatment interfered with by the remains of partially subdued tropical complaints, such as ague, remittent fever, liver derangement, and chronic dysentery.

The pertinacity of hepatic disorders after a return from the tropics is proverbial; chronic dysentery is scarcely less pertinacious, the colon and rectum being thickened and hyperæmiated, even when not ulcerated. The pertinacity of that unknown condition of the nervous system which responds by a fit of ague to any morbid stimulus is another notorious fact, and the long-forgotten Jungle-fever may be brought back by getting the feet wet in our London mud. I need not remind the reader of the pertinacity of anæmia in those invalided in India, if it has resisted the bracing influence of the long sea voyage.

This question of the complications by which the progress of uterine disease may be affected is not at all peculiar to the pathology of tropical climates; it arises daily in consultation practice. In the worst cases which come before us, we have not only to detect disease, but to determine how far the best treatment will be rendered more or less ineffectual by the intercurrence of complicating agencies.

Uterine inflammation, under some one of its various forms, may be clearly defined; but this may be only one element of the case, associated with other pathological conditions, which increase the difficulty of curing the uterine disease. This brings us to the treatment of uterine disease in those who return from a tropical climate, which shall be the subject of another communication.

ON
SOME COMPLICATED INJURIES ABOUT THE SHOULDER-JOINT,
AND
ON FRACTURE OF THE SCAPULA.

By Frederic C. Skey, Esq.,
Surgeon to St. Bartholomew's Hospital.

I wish to bring under notice some forms of injury about the shoulder-joint, of not very infrequent occurrence, and which I am inclined to think occasionally escape detection. In order to render the statement clear, I propose to make a starting point from the most frequent form of injury to which this region is liable—viz., dislocation, simple and uncomplicated. If you inquire into the nature of the violence which has led to dislocation of the *humerus* (not of the *shoulder*, as it is commonly termed, for the shoulder, correctly speaking, is incapable of dislocation), you will generally make out that in the act of falling the man's arm has been extended for the purpose of breaking the fall; and that direct force has been applied on the under surface of the limb, whether hand, fore or upper arm; the result of which is, that the head of the humerus is thrust out of the glenoid cavity, by a counter force rupturing the lower part of the fibrous capsule. The ultimate position of the head of the bone depends much on that of the arm at the moment of the fall; whether extended straight from the trunk—the most common position, when the head falls into the axilla—or forwards, or backwards, when it is found in either case in the opposite direction.

I shall, however, take as an example a case of dislocation into the axilla. The shoulder is flattened by the removal of the support, as it is termed, given by the head of the bone to the deltoid, which, being stretched, shows the clean outline of its origin. If you pinch it, you find it firm and tight—so tight, indeed, as to draw the elbow away to the extent of about four inches from the side of the body. If you attempt to approximate the arm to the trunk, the latter will recede, because the movement is a painful one, by drawing yet more positively on the already stretched deltoid and supra-spinatus muscles. If, on the contrary, the arm be raised, and the deltoid relaxed, pressure of the fingers upon it will detect the absence of the normal support it possesses in health, and the head of the bone will be felt in the axilla. If the hand be now applied in a similar manner to the opposite axilla, the different relative positions of the bones will be obvious; and, finally, it will be found on measurement that the affected arm is about an inch longer than the sound one. And this sign alone is conclusive as to the existence of dislocation, because the scapula being unchanged in its position, if the humerus extends an inch longer than the opposite bone, it is clear that the head cannot reach the socket. Add to the above the acknowledgment of a recent injury, and you have abundant evidence of simple dislocation of the humerus into the axilla.

The only variety of this accident to which I shall refer is that of dislocation forwards and inwards, in which the head of the bone is carried far upwards towards the clavicle, and when it is said to lie under the pectoralis minor or under the coracoid process, and which process obstructs its further progress in that direction. This is a rare variety of this dislocation, and I should not have alluded to it but for the purpose of marking two features peculiar to it: 1st, that the arm is rather shortened than lengthened; and 2nd, that it is usually accompanied by numbness of the arm, consequent on pressure of the head of the bone on the brachial plexus. The numbness accompanying ordinary dislocation is either absent or very partial; in this variety it is large and general. In both instances it subsides on the reduction of the displaced bone. I remember, some thirty-five years ago, a man being brought into the hospital with a dislocated humerus. While undergoing the necessary manipulation, distinct crepitus was felt in the joint. Its nature and locality were uncertain. The injury was very deliberately examined by the entire surgical staff. Much discussion arose on the case, which was evidently one of dislocation. However, the bone was reduced by the ordinary method adopted at that era,—namely, by extension of the arm outwards,—and the crepitus was felt no more. The man recovered in the usual time. A second case presented itself within the year, the entire features of which were precisely similar to the former one.

The impression produced on the minds of many observers of these cases has ever been, that it is possible to have, as the accompaniment of dislocation of the humerus, a crepitus, not caused by a fractured bone, but arising from some unusual injury sustained by the joint; and for many years I was myself inclined to adopt the same explanation, but later experience has taught me otherwise. It appears to me more reasonable to infer in these cases an undetected fracture, than the presence of crepitus without fractured bone. I cannot comprehend the sounds or sensations of crepitus to be caused by the attrition or rubbing together of any two structures of which the shoulder-joint is composed; and under these circumstances I cannot doubt that the injury in both these cases consisted of fracture of the glenoid cavity superadded to dislocation; and when it is recollected that the mode of reduction adopted at that period consisted in drawing the humerus outwards, it is not surprising that the fracture should escape detection during the operation; and if it then escape observation, it is not probable that it would attract notice afterwards, because the simple agency of rest would be available to the recovery from both the fracture and the dislocation.

While employing the term "crepitus," I may observe that there are three distinct varieties of sensation to which the term may be applied, and which it would be well for you to observe. The first is the sensation conveyed by the rubbing together of the two fractured ends of the shaft of a long bone in a healthy subject; the second, the sensation peculiar to the rotation of the thigh in fractured neck of the bone in very odd or debilitated persons, which resembles the cracking of an egg-shell; the third, the sensation occasionally conveyed to the touch by the movements of a diseased joint. The last of these is very distinct from the other two, and is the product of tissues less hard than bone. The term "crepitation" is limited to the breaking down of membranous tissues by the pressure of air confined within them. In the two cases I have above quoted the crepitus was clear and distinct, and, as I consider, could have been obtained only by the attrition of a broken bone.

The form of injury which I am about to describe is that of fracture of the glenoid cavity. A man sustains a fall on the shoulder, with the arm parallel to the body, but the force of the blow, whether the result of a fall or of direct violence, is thrown *on the deltoid*. The result is a fracture of some bone, indicated by palpable crepitus. Observation will teach you to judge tolerably correctly, by the sensation thus obtained, whether the crepitus indicates a large or a small fracture, and such knowledge will prepare you for a correct diagnosis of the real injury. Now, the diagnosis of fracture of the glenoid cavity is obtained chiefly by negative evidence, and in recalling to your recollection the bony structures immediately around, you subject each to a careful examination. You examine the clavicle, acromion, and the spine and coracoid process of the scapula. You find all bear forcible pressure, and may therefore be inferred to be sound, you next examine the head of the bone. Pressing your hand firmly on the deltoid, you rotate the arm freely, and you find the head to move as freely with the shaft, and the movement to be unattended with pain. You repeat this examination by raising the arm at right angles with the body, and pressing the thumb forcibly on the head of the humerus in the axilla, you again rotate, and the movement is both painless and inaudible, revealing no fracture. Nothing remains but the scapula, which, if you are correct in your diagnosis or crepitus, must be broken. It can be nothing else. If you now, while pressing the head of the humerus against the glenoid cavity, rotate the bone, the mystery will be solved, and crepitus will be evidently the result of fracture of a greater or less portion of the glenoid cavity. This evidence can only be obtained in one way—viz, by pressure of the head of the bone against the broken socket. The existence of fracture is borne out by the direction as well as the violence of the force which has caused it, and by the presence of local pain, due not to the broken bone merely, but to a corresponding injury done to the soft parts over and around it. If you have arrived at your conclusions hesitatingly, if a doubt remain on your mind as to the existence of fracture, the patient himself will often solve it on putting the question to him—Have you broken a bone?—and especially if a man of somewhat more than ordinary intelligence; because, however palpable may be that compound sensation of hearing and touch we term crepitus, it is still more palpable to himself when his mind has been directed to it by the probably protracted discussion that has taken place on the nature of his accident. When a patient is made cognizant of the nature of the accident, his evidence becomes valuable. These cases cannot be readily mistaken for dislocation, for in truth they have no sign in common with it, except the disinclination to move the arm, which is universal in its application to all injuries in this region; but especially is there no diminution in the rotundity of the shoulder, and no increase in the length of the arm.

Several of these examples of fracture of the glenoid cavity have come under my observation during the last year. Both the nature and the extent of the injury are readily detectable by the inductive method of examination I have described. The extent of the fracture is not always so easily determined; yet by carefully observing the character and amount of the crepitus, and noting whether it is readily produced by the act of elevating the arm, and pushing the head of the bone against the socket, we shall make a close approximation to the truth.

Fracture of the glenoid cavity may be complicated with dislocation of the humerus; but, so far as my own observation leads me, I believe it to be far more uncommon than simple fracture without dislocation. If the fracture as usually occurs, when superadded to dislocation, is confined to a small portion of the glenoid cavity, the signs of fracture merge in the apparently larger accident of dislocation, the evidence of which is uninfluenced by the presence of the injury to the bone. The shoulder is flattened, the arm is lengthened, the head of the bone revolves on the thumb pressed upon it in gentle rotation of the bone, while the fractured scapula lies behind the head, and escapes observation, unless the violence has been unusually great and the fracture unusually large, and comprising one-half or more of the socket from which the head is thrown. The evidence of dislocation is conclusive, while that of fracture is so imperfect and is so uncommon, that the injury escapes observation. The heel is applied, the bone is reduced, and although the return of the head into the socket may be accompanied by some unusual sensation, which is really that of crepitus, the reduction has been so satisfactory, the restoration of parts so complete, that the question of fracture may scarcely enter the thoughts of the surgeon. Nor does there arise in the after-history of the case any circumstance by which to determine the occurrence of fracture. The fragments are brought into contact by the act of reduction, and in the course of a few weeks are united.

A case of more than usual interest occurred to me lately in the person of a man, aged sixty, in Abernethy ward, who had sustained an injury to the shoulder three weeks prior to his admission. The head of the humerus was obviously thrown from its socket, and the flattening of the shoulder was unusually great. The deltoid was tight, and the elbow was drawn from the side. The arm was lengthened by one inch. The head of the bone rotated with the shaft; the coracoid process was unbroken, but there was distinct crepitus on moving the arm. The man was very positive in his assurance that the injury was caused by a direct fall on the shoulder. I made an attempt to reduce the dislocation, under chloroform, by the aid of pulleys. I brought the bone towards its natural relation to the acromion process, by extension downwards, with a padded fulcrum in the axilla. The natural rotundity of the shoulder was restored during the extension, but on its remission it disappeared. On the second day following I repeated the attempt, more critically, persevering in the extension for nearly half an hour, but with no better success. While under extension the head of the bone became prominent, but returned to its abnormal position on remitting the extending force.

On reviewing all the circumstances of the case, there can be little doubt that the glenoid cavity is separated from the rest of the scapula either in a large proportion or absolutely. A healthy man, possessing the entire power of movement of his arm, sustains a fall directly on his shoulder; the head of the bone is struck inwards with force against the socket, and extreme flattening of the shoulder and crepitus are the immediate consequences; the arm is lengthened, and the elbow projects from the side; the unbroken condition of the head is rendered obvious by its free rotation under pressure; the coracoid process is firm in its position; while two attempts at reduction fail to restore the head of the bone to the glenoid cavity. In what can this injury consist, if not in extensive fracture of the glenoid cavity—the socket of the joint? I believe the fracture to be a large one, because, having seen many cases of fracture of the lower portion of the glenoid cavity, I have never observed one example in which the symptoms were so strongly marked as in this case; while the slipping back of the head of the bone, after being brought on two occasions to its normal position, appears to infer the absence, and therefore the inability, of the socket to retain it. The only treatment the case appeared to me to be susceptible of, was that of placing a large pad in the axilla, and leaving the rest to nature; and this plan was adopted.

In cases of fracture of a greater or less portion of the glenoid cavity, an easy position of the arm is all that is attainable, and indeed all that is required. The fragments are usually united in three weeks, during which the arm is placed in a sling.

I had recently another case of fractured scapula under my care in St. Bartholomew's Hospital. This fracture was the result of a fall with violence, but the precise direction of the blow I could not ascertain. The fracture extended vertically through the bone, either through or behind the notch. It was unattended by dislocation, or even by displacement. Its existence was ascertained by the presence of crepitus, which was well marked, and might be detected either by the pressure of the fingers, or by desiring the patient to put into action the trapezius muscle of that side. A large pad was placed upon the scapula, which was firmly bandaged to the trunk. His recovery was both quick and complete. I have described elsewhere a case of fracture of the inferior angle of the scapula. The injury occurred to a lady, who was thrown from her horse. In this case, I could only obtain crepitus by bringing into action the teres major muscle, which takes its origin from the surface of the scapula, through which the fracture had occurred.

ON

A CASE OF CÆSARIAN OPERATION.

By Henry Ashton, L.R.C.P., Edin., Preston.

Peter H—— came to my house about nine o'clock on the morning of the 19th of December last, to ask me to attend his wife in her confinement. He told me that his wife had commenced being poorly between one and two o'clock in the morning, and that she had parted with a large quantity of blood during the night, and when he left home her pains had become much stronger. He further stated that she expected not to survive this confinement, and that he and her sisters thought the same, and requested me particularly to tell him on our arrival if there was any danger, on account of their religious belief.

Although there were great lameness and deformity of the spine and left hip, which had commenced about ten years previously, I did not apprehend any danger, except from the flooding; for when I attended her three years before, in her eighth confinement, she was delivered easily of a full-grown child, and was very soon out of bed, and doing what household duty she was capable of. Since then the deformity and lameness had not, to all appearance, greatly increased.

On my arrival, whilst I was taking off my overcoat in the lower room of the house, I heard her cry out from two pains, and I noticed that the cry had the peculiar sound heard in obstructed labour. On going to her, I saw that she had an anxious and distressed countenance, her pulse being 90 and soft. I found that her underclothing was covered with blood, and small clots of blood lay about the thighs and in the vagina. On introducing the forefinger, I felt what appeared to be the child's head, with the scalp tumefied, in the cavity of the pelvis, and between it and the os pubis, extending to a length from two to three inches, a soft substance having the feel of the placenta. A slight flooding continued between the pains, and ceased, in a great measure, whilst the pain was on. I determined to make a careful examination, and commenced to introduce the hand to enable me to do so. I now found that I could not possibly, with the force I was justified in using, get the knuckles to pass the vulva, and that the tuberosities of the ischia, at their anterior points, approached so close as barely to admit two fingers lying together. The attempt to introduce the hand brought on strong expulsive pains, and I again attempted to get the hand to pass, but could not succeed. By keeping the hand well back, and the thumb over the sacrum, I was able to get the first two fingers pretty high up, and perceived that what I took to be placenta was the anterior and posterior lips of the os uteri, projecting between the upper edge of the left os pubis and what, at the first examination, appeared to be the child's head, but which was in reality the promontory of the sacrum, and, as it afterwards proved, the last lumbar vertebra, covered by the internal integument, greatly swollen from the pains pressing the child upon it above. The os uteri was fully dilated in a longitudinal direction, and I could just reach to get the finger along it for about two or three inches, and felt the membranes, during a pain, fully distended. As the flooding continued, I contrived during a strong pain, by reaching as high as possible, and keeping the finger pressed firmly against the membranes and rubbing with the nail, to rupture them, and there was no flooding after. I could now feel a hard presenting part, but whether it was the head or not I could not distinguish. The tips of the two fingers would lie sideways between the sacrum and pubis on the left side, plainly showing that there was little more than an inch of space. On the right side, the pelvis appeared to be wider, but the finger could not reach sufficiently high to measure the space, and, as I stated above, I could not introduce the hand into the vagina from the near approximation of the ischia.

As Mrs. H—— had been able to walk and perform her household duties since she first complained of pain and lameness in her left hip, ten years before her death, the lameness appeared to be caused by chronic arthritis; and to the time of her being pregnant, three years since, the disease made little if any progress; but during the latter months of her two last pregnancies, her husband was obliged to carry her from bed down stairs in the morning, and place her on a chair, where she would remain sitting till night, when he had to carry her to bed again. During this time she was able to wind the bobbing for his weaving, and employ herself in sewing. He had to follow the same course during this her last pregnancy.

The disease, which had remained dormant for so many years, and which appeared to have progressed actively again within a few months, was now evidently malacosteon. I formed the opinion, after examining her in the several positions which she was able to assume, that, from the extreme contraction of the brim and outlet, the inability to feel distinctly the presenting part, (which, whatever it might be, evidently could not enter the brim, for I could only just feel it with the tips of the fingers got as high as possible through the brim, on the left side, although she had had for an hour, since the rupture of the membranes, as strong forcing pains as I think I ever witnessed—with the exception of one case, an arm presentation, in which the child had to be dismembered from the impossibility to turn), and the impossibility to get the hand and the fingers sufficiently high to guide an instrument to perforate the presenting part, it would be impossible to deliver her by the natural passage.

I determined at once to have another opinion, and sent a note to Mr. Haldan, of Preston, with directions to the messenger, if he was not at home, to go to some other gentleman of experience, giving him several names. Mr. Haldan arrived in a little over four hours, with my son. I told him what I thought about the case, and how she had gone on since my arrival. During these four hours she had kept having strong pains at intervals of a few minutes; but I could not perceive the slightest alteration in the presenting part. Mr. Haldan, after making a most careful examination, arrived at the same conclusion as myself. He had the opportunity of seeing and examining frequently a case of distorted pelvis before, in which the Cæsarean operation was performed, and in which two eminent medical gentlemen of Manchester had given their opinion that it was impossible to deliver without its performance; and he said, as far as he could judge, he thought this a worse case of distortion.

It was now a point with us whether we should procure another opinion, and we weighed the matter over carefully and we hope rightly. We were at a distance of five miles from any medical man, and there was the chance of not finding any of the gentlemen at home whom we might select; the poor woman had been nearly seven hours in strong labour since I ruptured the membranes, but the pains were getting weaker, and she was evidently becoming more exhausted; her cries during the whole of that time had been so distressing that I had several times made an excuse to leave the house; the pulse was getting quicker; and it was painfully evident that if there were any lengthened delay, the little chance the poor woman had would be thrown away. We were not certain that the child was living, but, as far as we could ascertain, we judged so; and although its life would not have any weight compared with that of the mother, in this case it deserved to be taken into consideration in weighing the chances; for, from the severe nature of the disease which afflicted her, the extreme stage it had progressed to, from the active character it had assumed within a short period, and its apparently still active progress, there appeared but little chance, if any, of saving the mother; and by Cæsarean section, there was just a faint hope that one or both might be saved. There was no possibility of using the long forceps, for there was not room on the left side, at the brim in width, for half a blade, independently of the contraction of the outlet; and on that side only could a presenting part be felt; Mr. Haldan, indeed, from the larger size of his hand, could not reach it. For the same reason, the perforator could not be used; for no person would be able to guide it, or to tell what he was perforating: and the danger would be as great, if not greater, from the long time that it would take to break down the head, if it could have been reached, and the bruising and contusion of dragging it through the contracted brim, as from the Cæsarean section. We decided to tell the poor woman and her relatives the true nature of the case, and let them decide for themselves. It was fully explained to them that there was scarcely a possibility that she could survive the operation, and if they wanted any other opinion we would try to get it for them. They replied that they did not wish it, and desired us to do what we thought was best for her, and allow her whatever chance there was of saving her life. She was also wishful to have the operation performed if it would give her a chance of life and relief from her suffering, but this last reason did not influence our decision. As the case was urgent, and she had been many hours in strong labour without the slightest progress being perceptible, and as the authorities agree in saying that the ill-success which has attended the operation in this country is owing to its being delayed too long and confined to those cases chiefly where the constitution is undermined by existing disease, Mr. Haldan said that if I would perform the operation he would share the responsibility of medical criticism. I decided to do it with his assistance, and made the necessary preparations. As there was no fire-place in the chamber, and it was very cold and frosty, we got a bed brought down into the lower room, and a moderate fire made up. She passed her urine immediately before being brought down, and as she had a frequent necessity to pass it, and suffered great pain if she did not immediately obey the call, it appeared as if there was not room in the pelvis to permit the bladder to contain any quantity; she could only void it in a sitting position, and had often to be lifted out of bed to relieve herself. The rectum had no accumulation in it.

After being brought down and placed in a convenient position on the bed, Mr. Haldan put her under the influence of chloroform; and having ascertained that the placenta was not in front, I made an incision through the integument at the most prominent part of the abdomen, about an inch above the umbilicus, and from an inch to two inches in length. which exposed the uterus. An opening was made into it so as to admit two fingers of the left hand; and using these as a director to protect the child, the incision was extended down towards the pubis, as near as I can say four inches, and an attempt was then made to extract the child; but the opening not being sufficiently large, it was extended upwards towards the ensiform cartilage, the whole extent of opening being about seven inches. The uterus was firmly contracted on the child, and I had some difficulty in getting my fingers between it and the anterior wall of the uterus, which was nearly half an inch in thickness. It was so tense that the cutting of it had the feel of cutting through the costal cartilages. Writers on midwifery say that it is generally thin, and easily cut. The right shoulder of the child lay in front, and hooking my finger in the axilla, I extracted the infant. Whilst I held the child, Mr. Haldan, extracted the placenta, and kept the sides of the wound so closely approximated after the extraction that it was nearly impossible for any air to enter the cavity.

Possibly too much stress may be laid by authors upon the necessity of preventing air from entering the abdomen, for in the operation for diseased ovary it can scarcely be avoided, and it does not appear to add to the danger. If I may give an opinion, I think a little exposure to the air would add little to the danger of after-inflammation, and might have a favorable tendency in causing the uterus to contract so as to avoid some of the danger from hæmorrhage. I have seen the operation for the extraction of a large ovarian tumour, weighing with its contents nearly fifty pounds, most skilfully performed by Dr Clay, and where, from the extent of the adhesions, the abdominal cavity was necessarily kept open for about three quarters of an hour; yet the woman recovered, with scarcely an untoward symptom.

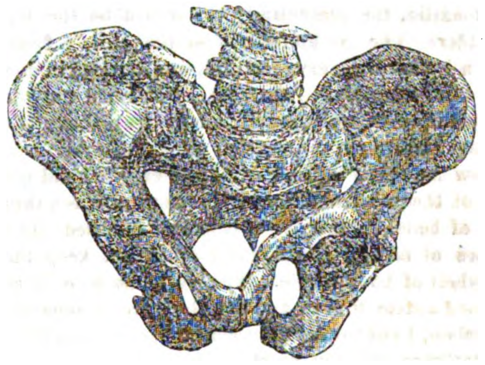
There was only a small amount of bleeding from the incisions through the integument and uterus.

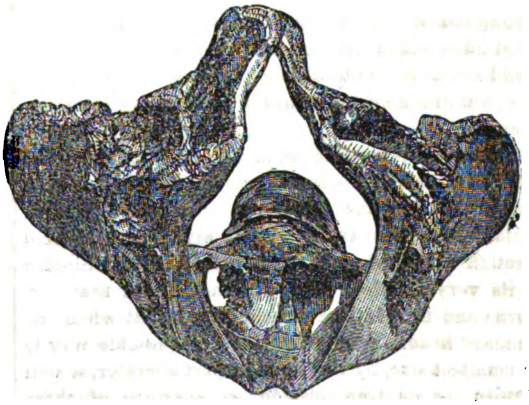
After the necessary number of sutures were inserted, the wound was dressed with strips of adhesive plaster, over which a thick pad of linen was placed, and a broad bandage, with a sufficient degree of tightness; the whole operation, from giving the chloroform to the application of the bandage, not occupying twenty minutes.

The child—a male—was asphyxiated, but a little blood was allowed to flow from the cord, and artificial respiration, with friction, being kept up for a quarter of an hour, it began to breathe freely and appeared likely to live; but it became jaundiced on the sixth day, and died in convulsions on the eighth.

Mrs. H—— was faint and nearly pulseless immediately after the operation, but the pulse rallied upon the administration of some brandy, and we left her in an hour, after giving her forty drops of laudanum. My son remained with her, and I saw her again in three hours. I found her as well as could be expected; pulse 112, of moderate strength; rather pale; said she was relieved of a great amount of pain, but that it was increased occasionally, as she had previously felt after-pains; her voice was good and strong. I stayed an hour with her, and on leaving gave her twenty five drops more of laudanum, and directions to her attendants to give her two table-spoonfuls of sago gruel with a little brandy in it every half hour, if she could take it, and was not sleeping; I also desired them to fetch me in the night if necessary. I rode over in the morning to see her, and arrived at the house about half-past seven A. M. She had slept about two hours; pulse 120, and of moderate strength; tongue a little furred; some thirst; abdomen soft, and not over-painful on pressure. The uterus felt contracted, and as the bandages had become slack, I tightened them. The voice was good, and there was considerably more color in the face; the skin also was warm. These symptoms were favorable, but she had vomited twice in the night. Upon using the catheter, I found there was only about an ounce of urine in the bladder. I ordered the gruel to be given without brandy, but if faintness came on, the latter was to be renewed. After staying with her three-quarters of an hour, I left, with the intention of seeing her again in the afternoon, but was unavoidably prevented from seeing her before half-past five P. M., and I then found her fast sinking, apparently from internal hæmorrhage, for she was pulseless, very restless, and the face and extremities pale and cold. I gave her some aromatic spirit of ammonia and brandy, but she was evidently dying. She had a great wish to be turned on her side, and she expired immediately after this was done, about half-past six P. M., having survived the operation twenty-five hours.

I was permitted to make a post-mortem examination, and with the assistance of Mr. Haldan did so on the evening of the 21st. The wound in the integuments appeared to have contracted considerably, and that in the uterus was not more than four inches in length. The uterus itself was about the size of a child's head, and of a pale pink-color. We emptied out from the lower part of the abdomen about three pints of blood, for it more than half filled a large chamber-utensil—a sufficient proof that hæmorrhage from the lips of the wound in the uterus had been the cause of death. As she had regained her color in a great measure the morning after the operation, and her pulse was moderately strong at the time of my visit, the hæmorrhage must have commenced when she began to be restless and pale, about two P.M. Possibly the reaction and the warmth of the room might have encouraged it. May there not be too much stress laid upon the necessity of keeping the apartment at a high temperature? The examination of the pelvic viscera was not carried further.





The accompanying engravings are taken from two photographic views of the pelvis, and I have by me also accurate diagrams of the brim and the space between the rami of the ossa pubis and ischia to its widest part, between the tuberosities of the latter bones. From the promonotory of the sacrum to the brim of the pelvis, opposite the centre of the acetabulum on the left side, is one inch and five lines; on the right side, from the same points, is one inch and ten lines; the transverse of the diameter opposite the centre of the acetabula is three inches and three lines. The widest part, between the tuberosities of the ischia at their posterior part, is two inches and seven lines; and at a distance of nearly two inches from the under side of the symphysis pubis, the width is only one inch and two lines. From the point of the coccyx to the under surface of the symphysis pubis is four inches: the depth of the symphysis is less than one inch. The curve of the sacrum is so great, that the distance from the top of the sacrum to the tip of the coccyx is only two inches and a half. The promontory of the sacrum, instead of being half an inch above the level of the upper part of the symphysis pubis, is three-quarters of an inch below it, causing the upper edge of the fifth lumbar vertebra to be nearly on a level with the symphysis. This vertebra and the curve in the sacrum, covered with the swollen integument, had to the finger exactly the feel of a fœtal head. From the external edges of the crista ilii there is a distance of nine inches and a half; and from one antero-superior spine to the other eight inches and a half.

These measurements are all exclusive of the soft parts, which would diminish the measurement of the brim, at the smallest allowance, four lines. The junction of the fourth and fifth lumbar vertebræ is the most projecting part to the pubis on the left side; and from the spine being distorted to that side, the presenting part would lie against the lower part of the fourth lumber vertebræ, and on the other side of the left os pubis, which explains the reason why it was impossible to feel it on the right and wider part of the brim. If the outlet had been of the usual size, there would have been no difficulty, I think, in feeling the presenting part on the right side as well as the left; but, owing to the distortion of the spine, it would be from one to two inches higher than on the left side. As far as I could judge from the little time I had for observation, when I got hold of the right axilla, the presenting part would be the left shoulder. The circumference of the child's head, which I measured very carefully, was fourteen inches and three-quarters. I am sorry that I had not the oppportunity of weighing it, but it was above the average size.

Now the pelvis is dried, it is quite easy to bend the rami of the pubes and ischia; the sacrum was a thin shell of bone, the interior of it being converted into a species of fat; in cleaning it I could not keep the thin shell of bone whole. The vertebræ were in so softened a state, that in dividing the spine to separate the pelvis, I cut through the centre of the third lumbar vertebra with the greatest ease; for, owing to the imperfect light of a candle, the joint was not readily distinguished. If such a diseased state of the bone must have made further progress, the poor woman could not have continued to live much longer, and it would diminish the chances of recovery from the operation.

Supposing there had been no contraction of the outlet, and, being a natural presentation, it had been possible to use the perforator, could a full-grown child, above the average size, have been dragged through a brim so contracted, with head diminished to its very smallest size? Blundell says that Mr. Burns and Dr. Hull have ascertained, that when the standard head is reduced in the best possible way to its smallest size, by the most expert operator, it will require for its transmission an aperture of three inches in length, and one inch and three-quarters in breadth. Would not the danger have been as great from the contusions, and consequent inflammation and suppuration, as from the Cæsarean section? I have a pelvis which was given me, in which the sacro-pubic diameter is three and a half inches, and the transverse diameter four and a half. The poor woman to whom it belonged was the unfortunate subject of violence; she afterwards became pregnant, and had to be delivered by craniotomy. She died, I was informed, two days after her delivery, never recovering from the exhaustion caused by the tedious labour and the operation, the extraction of the child being attended with great difficulty.

Drawing a fœtus eighteen inches long, in a softening state, through a small iron ring, and when the operator can get hold where he likes, and see what he is doing, is no criterion that such a thing can be done with a living child of the full size, through an extremely contracted pelvis on the living subject, nor does the eminent gentleman who succeeded in doing so, recommend its attempt.

The leaving the child to decay, as in Dr. Osborne's case, is all but universally condemned by the authorities of the present day, and Ramsbotham's arguments against it are very decided. Burns makes the following remarks as to Dr. Osborne's case:—"As the patient recovered, and afterwards, I think, died in the country, where she could not be examined, we cannot say to a certainty what the dimensions of the pelvis were." He further says, "A premature, or very small child, may be brought through a pelvis which will not permit, by any means, an ordinary-sized fœtus to pass. But it behoves us, in our reasoning, to judge every child to be at the full time, unless we know the contrary, and to make an estimate on the average magnitude."

Without presuming, I may venture to say that no person can judge of what should be done in such a case without seeing it; nor can the anxiety of mind which the practitioner, who has the responsibility of deciding what to do, be imagined; the position is no enviable one to be placed in. Both Mr. Haldan and myself trust that we decided rightly and for the best. I believe that I have written every fact, and concealed nothing belonging to our management of the case.

Walton le-Dale, 1860.

⁂ As this case has been made the subject of criticism before the details were made known, we think it just to the author to state our opinion that he has displayed throughout sound judgment and professional skill. The publication of it, as we observed, was, in the interest of science, a duty incumbent upon Dr. Ashton, and nothing but credit can result from him.—Ed. L.

A New Development of Life Assurance.—A remarkable development of the theory of life assurance was seen last week. A deputation, composed of directors of life assurance companies, waited upon Sir C. Wood, on Saturday week, and claimed a share in the compensation awarded by Government for the losses by the Indian mutiny, on the ground that they had an interest in the lives of the persons who were murdered.

ON THE ATHEROMATOUS EXPRESSION.

By George D. Gibb, M.D., M.A., M.R.C.P.,
Physician to the St. Pancras Royal Dispensary.

There is a certain class of diseases which examples here and there present to our notice amongst individuals who are constantly in the habit of mixing in the daily bustle of life, enjoying apparently a fair share of health, and whose appearance to many, both in our profession and out of it, is that of extremely good health. Such persons, if they go to assure their lives, will probably meet with a superficial or perhaps formal examination, because of their healthy appearance; and yet their lives are doubtful ones. The antecedent history may be a good one; nevertheless, owing to changes going on in the system at large, from the influence of fat and its numerous compounds, the invariable result of saccharine conversion in the economy, there is the development of a state of things which, although liable to detection by careful and minute physical examination, is more especially made known to the acute observer by what I purpose calling the "atheromatous expression." This peculiar expression has been the subject of careful study with me for a number of years, and is daily forcing itself upon my attention during the pursuance of my avocations. If riding in an omnibus, if a passenger on one of the river steamboats, or if in a railway carriage, some one or more individuals with the atheromatous expression may be present. Perhaps a person with it is sitting opposite to me in an omnibus, and he thus affords me an excellent opportunity of studying every lineament of his features, and further confirming the correctness of my own views and conclusions. In the many thousand cases of disease constantly coming under my notice in the immense field of London hospital practice, which it is my especial privilege to make use of, a tolerable number in both sexes, present themselves with it. In assemblages of persons, whether public or private, it is quite possible to point out those who possess it.

Such statements as the foregoing might give cause for uneasiness and alarm; this, however, will be removed when it is mentioned that persons thus featured, with quiet, care, moderation in living, the avoidance of excitement and of the special causes which help to further its development, may go on smoothly and comfortably till a ripe old age is reached. But, in accordance with our advancing knowledge, and the accuracy of our powers of discrimination of disease by the countenance and general physique—powers eminently possessed by those amongst us whose development of the perceptive faculties is strong, and whose organ of individuality is large,—it is requisite that the attention of the profession generally should be drawn to such an important subject as the present, as a discovery or announcement quite in accordance with the advancing spirit of the age we live in.

The atheromatous expression is an indication presented by the countenance of the changes which are either about to commence or are already going on within, and mainly affecting the condition of the blood primarily, and of the vessels which carry it secondarily. Without entering into the most important question now, of how the blood thus becomes diseased, it will be quite sufficient for my purpose to state that the atheromatous deposition in the coats of the bloodvessels is the consequence of the former. This latter may be pronounced in the larger trunks proceeding direct from the heart, and almost invariably have the cerebral bloodvessels associated in a similar condition; or else the arteries at a distance may be involved, when the expression is modified, as I shall presently show, into a variety or subdivision which I shall denominate the *calcareo-atheromatous expression*. Without stopping to inquire into the pathological peculiarities indicted in the foregoing observations, as they are probably familiar to most observers, I will mention that life is jeopardized by the risk of cerebral hæmorrhage or intense congestion, by fatal cardiac syncope, or by aneurismal disease in distant parts. There may be inherent disease that helps to develop this state of things, for it is observed sometimes in gout, rheumatism, disease of the kidneys, cancer, polysarcia, &c. Persons with this expression get through attacks of other diseases very badly, on account of the state of weakness and prostration which it necessarily engenders. The condition of the bloodvessels, whether it be deposits of atheroma or calcified or phosphatic matter, is never the result of any inflammatory process, but is unquestionably due to simple metamorphosis, through the agency of the blood.

It is, perhaps, not an easy matter to recognize the marked features of the atheromatous expression by almost any description that may be given, as the idea of it is very difficult to convey in words; the opportunity of having it pointed out would be preferable, and worth a hundred descriptions. Those, however, who are experienced in the facial physiognomy of disease may be enabled, perhaps, to recognise what is meant by the following observations:—

There will be noticed a peculiar greasy appearance of the face, especially about the prominent part of the cheeks and of the nose. The lips have a fulness which is unmistakable; the ala of each nostril is smooth and rounded; while the features generally seem plump and well developed, because of the subcutaneous areolar structures being well supplied with the adipose element. There is often a double chin, of varying dimensions. The skin of the face may be reddish, or perhaps pinkish, with the small vessels on its surface injected here and there with blood of a bright-red color, which extends in many cases to the tips and lobuli of the ears. The character of the injection is sometimes peculiar, and runs in irregular streaks, with little stellæ here and there. The eyes are very bright, occasionally watery (not from drink), and of a fatty lustre especially about the ocular conjunctivæ. Once in a while, a well-marked arcus adiposus or arcus senilis will be seen, which may be a simple arcus or a complete annulus. Sometimes the eyes are seen to be prominent, with the surrounding tissues filled out, as it were, by fatty deposits. The general complexion is heightened, and there is an air of ease and contentment about the individual as if the cares of life sat lightly upon him.

Although this expression is not at all uncommon in the aged, it is observed in a large number in the prime of life, and even in those who are much younger. I can call to mind a gentleman with it, who is not more than twenty, and in whom it will become further developed in a few years. The appearance of the nose and cheeks alone determines me in my opinion. He has no arcus. This I may observe, however, is not absolutely essential; but its presence, taken with other peculiarities, is corroborative of the expression, and renders it the more striking and manifest. But, as a rule, which I have worked out by watching a large number of persons thus featured, life is extremely uncertain, and sooner or later becomes the forfeit, to the astonishment of their friends, who had hitherto looked upon them as models of health from their complexion and general appearance. Yet, as I observed before, individuals whose daily course of life is regular and smooth, without excitement, may go on and live for years, and reach, perhaps, a comfortable age, with the lining membrane of their bloodvessels in a state of atheromatous disease. Let any secret source of annoyance and worry arise, however, to arrest the even tenor of their way, and if they do not experience a rupture of some minute cerebral bloodvessels, they may become the subject of other diseases in which the destructive saccharine conversion plays an important part, in depositing fat in the tissues of important organs. Pathologists at the present day might explain this saccharine conversion in the economy by the chemical changes which the amyloid substance or hepatine prevalent in almost all the tissues undergoes. But for some years before the latter was discovered, I had set down the changes in my own mind as due to those which the sugar undergoes, no matter what its source might be, or how formed.

There are certain expressions and appearances of the visage which must not be mistaken for that under consideration, as the florid redness, with perhaps natural roughness of the cuticle, has arisen from exposure to the vicissitudes of temperature and of climate. Such is visible in seamen, captains of ships, and many others who possess a weather-beaten countenance, a peculiarity which is altogether different. Other persons, again, possess a florid complexion without having suffered exposure, and who are free from disease; and discrimination is necessary to distinguish between these healthy states and that derived from atheroma. The appearances due to the lymphatic temperament are also liable to be mistaken for it.

The *calcareo-atheromatous expression* is a variety or subdivision of the other, and may be known by the following differences; the general features of the face are the same, but there is a whiteness or pallor of the countenance which depends upon another cause. The eye is fatty, and a distinct bluish-white annulus, or ring, surrounds the entire margins of the cornea. This ring may be narrow, very narrow, perhaps, and so will escape observation. A most striking example of it was lately under Dr. Farre's care in the medical wards of St. Bartholomew's hospital. This pallor (which varies in a mixture of the two expressions) and this bluish-white ring round the cornea indicate the extensive deposition of calcareous or earthy matter in the distal bloodvessels—that is, in the major vessels of the extremities: the radial, the ulnar, and the tibial, and occasionally the femoral and the axillary, in both sides of the body. They can readily be felt, during life, as hard and firm tubes under the finger. Mr. Canton kindly showed me a most exquisite representation of the bluish-white annulus in both eyes of a person in good health, in whom I at once recognised the calcareo-atheromatous expression; and although I have not as yet had an opportunity of examining his bloodvessels, I feel persuaded that they are slowly becoming hard cylinders from calcareous deposits in those of the extremities. The radial at the wrist felt hard under the finger.

Since then (Feb. 22d) I was requested by my colleague, Dr. Bealey, to see a woman, aged sixty, the subject of uterine hæmorrhage off and on for the last eight months, the catamenia having ceased for twenty years. This depends upon cancer of the uterus, which is felt hard and enlarged in the vagina. All the arteries of the body are quite hard, like twigs beneath the skin. When using any exertion, or forcibly coughing, sudden swellings used to appear on the arms along the course of the vessels, about two inches long; they would become red, then purple, and finally yellow and green, like the remains of a bruise, until their absorption was complete. A congestive swelling in the right groin used always to precede the catamenia, and would then vanish. Has had cough every winter for the last five years, and is now much emaciated, with a white face—in fact, the *calcareous expression* simply, with an entire absence of atheroma. The heart is not much diseased; its action is strong, giving to the pulse a hard and firm character, beats 104. Her mother was lame for twenty-five years from rheumatism, and lived to seventy-three years, and her father to sixty-six. There is no bluish annulus in this patient, but there is commencement of deposit at the upper part of the cornea in one eye. This case is a practical verification of my remark, that the heart and all the bloodvessels are not simultaneously extensively diseased; for here we have all the latter affected, and the former triflingly so, or perhaps not at all organically involved, beyond calcification (not atheromatous degeneration) of the coronary arteries.

In my work on "Diseases of the Throat and Windpipe," just published, I have further dwelt upon this subject, together with the relationship which subsists between the changes in the cartilages of the larynx and in the arterial bloodvessels, but will refrain from entering into it here. I may observe, however, that as a rule atheromatous conversions are the commonest, and mostly involve the heart; whilst, on the other hand, calcification of the bloodvessels is more rare, and leaves the heart comparatively uninvolved. A mixture of the two is still less frequently to be seen; but a good example in point is the patient of Dr. Farre, already alluded to.

Among six hundred autopsies performed by myself, together with a very much larger number undertaken by others at which I have been present, the verification of the correctness of my views, in relation to the pathological changes giving rise to these three forms of expression, has been largely proved in those instances in which the latter were recognized during life; and although it is tolerably frequent, and rather common in some classes of individuals, there are others, again, who do not and never will possess it.

In my description of the atheromatous expression, the features will not always come up to what I have stated, but will present various modifications, no doubt influenced by the circumstances and condition of the possessors. There may be an absence of the fatty look in some, yet the features have the peculiar puffiness which resembles the brawny œdema of the arm, for instance, in cancer. But it is a most curious and really wonderful fact, that the intellectual vigor of the mind, in its perfection and purity, remains unchanged, and yet the body (no matter if the expression is present even before thirty) is in the condition of advanced senility; so that an individual who may be affected in the manner described at forty, and who should be enabled to reach sixty or even seventy, has his corporeal capacity relatively equal to the ages of eighty and ninety.

It is not my purpose to go into the question of treatment at all, but two or three things may be mentioned in concluding this paper. Persons thus affected should avoid malt liquor, and rather substitute light wines and pure spirit. Substances likely to turn into fat and atheroma should be eschewed. Chloroform should not be given when operations are required. Above all, a proper estimation of such lives should be taken into account by insurance companies. And lastly, in describing cases of disease, the use of the particular term of expression of the countenance will be found most convenient.

On another occasion, I may enter somewhat more fully into the details of this important subject; for the present, it is my desire only to introduce it to the notice of the profession.

Portman street, Portman square, May, 1860.

REPORT OF A CASE OF

RETAINED MENSES FROM IMPERFORATE OS UTERI;

OPERATION: DEATH.

By I. Baker Brown, F.R.C.S. (Examin.)

Senior Surgeon to "The London Home."

S. L——, aged sixteen, the daughter of a monthly nurse, was brought to me at "The London Home" by her mother. She had never menstruated. About every month she suffered great pain in the abdomen and back, lasting for a period varying from a few hours to three days. This was accompanied by all the usual symptoms of menstruation, without, however, there being any external appearance. The pain was described as being so severe, as to cause her to roll about the floor in agony. She had all the usual marks of confirmed puberty, was tall and well made.

On making an examination, per vaginam, I found it terminate superiorly in a perfect cul-de-sac. The neck of the uterus could be felt in its normal position; but no os uteri was distinguishable. The lips of the os could be obscurely made out, covered as it were, with the lining membrane of the vagina. By examination through the rectum, the uterus could be felt increased in size, and presenting to the taxis a sense of fluctuation. It was evident that the case was one of retained menses from congenital closure of the os uteri. The general health was becoming a good deal affected. I explained to the mother that the closure of the os uteri must have existed from birth, and that nothing but an operation would be of any service.

She was, therefore, admitted into "The London Home" on March 5th, and on the 8th of the same month she was subjected to the influence of chloroform, and further examined by Dr. Hall Davis and Mr. Philip Harper, who both agreed with me as to the nature of the case and the necessity of an operation. I therefore proceeded to operate in the presence of those gentlemen and Dr. Menzies, Messrs. Ince, Ince, jun., Andrews (all of Pimlico), Spencer and Dr. Giles. She was placed in the lithotomy position, and I passed my finger into the vagina until the end of it was in contact with the obscurely-felt lips of the os uteri. I now introduced a pair of sharp-pointed straight scissors along the finger to the obstruction, and gently pressed them through it, without opening them. It required very little force to penetrate the membrane. On withdrawing them, a quantity of thick fluid, of treacly consistence, but of the color of red-currant jelly, immediately flowed out. I now passed one finger into the rectum, whilst gentle counter-pressure was made on the abdomen, and thus a quantity of the fluid flowed out (about five or six ounces, subsequently increased to nearly three-quarters of a pint). The vagina was syringed out with warm water, a napkin and binder put on, and she was placed in bed. When she had recovered from the chloroform, one grain of opium was given to her, which was to be repeated every six hours. There was not the least hæmorrhage.

The following account of her progress is from the notes of Mr. Wratislaw, the visiting surgeon in charge:—

March 9th.—Nine A.M.: Has had a good night, and felt so well this morning that she was found sitting up in bed doing some crotchet work. The thick fluid had continued to flow during the night, and the nurse had collected about six ounces of it. It had now changed to a brighter red, having the appearance of natural menstruation. Nine P.M.: Slight sickness had come on in the course of the day, and there was some uneasiness with tenderness in the epigastrium.

The countenance was swarthy; tongue coated. Ordered hot linseed poultices over the abdomen; and to take three grains of grey powder with five grains of Dover's powder at bedtime, and effervescents every three hours.

10th.—At three A.M., as she had not slept and was very restless, a grain of opium was administered as a suppository. Not being relieved, another grain of opium was given by the mouth. This produced no effect, and at nine A.M. vomiting of dark bile came on and was very frequent. The pain in the epigastrium was severe; pulse 120; tongue foul; bowels have not acted. She lies upon her back, with the legs stretched out and extended. Turpentine epithems were applied over the abdomen, and a dose of castor oil was given. This produced dark bilious motions, but the sickness continued. In the course of the day tympanitis came on, and the tongue became very dry; pulse 130, very weak. She became so prostrate and sinking in the evening, that frequent doses of ether were administered.

11th.—Has had a bad night; the vomiting of the same bilious matter is incessant; pulse 140; tympanitis and tenderness of the epigastrium; tongue dry and brown, except at the edges, where it is red. A grain of calomel was given, and a blister applied to the abdomen. The sickness ceased after this, but she continued to sink, and died soon after four P.M., continuing perfectly sensible to the last.

The following account of the post-mortem appearances was drawn up by Mr. Leggatt, of William-street, Lowndes-square, her usual medical attendant, and Mr. Philip Harper:—

Examination twenty-six hours after death.—On opening the abdomen, there was not any appearance of general peritonitis; but on examining that portion of the intestines which was in contact with the uterus, there was evidence of local inflammation, plastic lymph having been recently thrown out. The uterus was large, and had recovered from its retroflexed condition. On being removed from the body, it was laid open through the cervix. Its lining membrane was very vascular and injected, from the long contact of the menstrual fluid. The puncture had been made into the os, and its surrounding edges presented a dark and ecchymosed appearance. The ovaries were enlarged, softened, and granular in appearance and feeling. Liver quite healthy.

Remarks.—Cases of this kind are very rare; it is, therefore, of the utmost importance that they should be recorded, so that all medical men may know that such cases do sometimes occur. Ignorance upon this point is calculated to do much mischief, both to the profession and the public. The feelings of the relations may be severely tried, and the reputation of the surgeon seriously imperilled, by an expression of opinion as to the non-advisability of surgical interference. The slightest consideration renders it evident that there is no choice but between continually increasing suffering, leading to ultimate death, and the effort to restore the natural channel by surgical means.

Connaught-square, April, 1860.

ON

A NEW URETHROTOME FOR THE TREATMENT OF OBSTINATE STRICTURES OF THE URETHRA.

By JOHN MARSHALL, ESQ., F.R.S.,
Surgeon to the University College Hospital.

I WISH to communicate to the profession, through the pages of THE LANCET, an account of a new instrument for the internal division of strictures of the urethra, which, so far as I can learn, involves a novel principle of action, and may be worthy of trial, not only by myself but by my professional brethren.

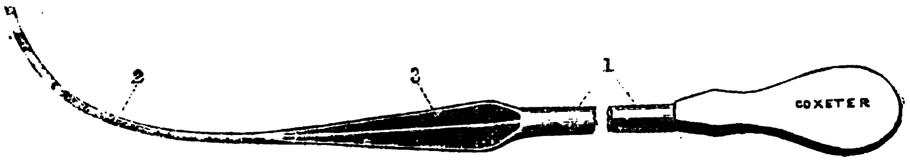
The instrument is a very simple one. It consists, as the subjoined wood-cut will show, of a solid steel bougie, of the size No. 10 in the stem, marked 1, of the size No. 2 for three inches at its curved end (2), and having an intermediate cutting portion (3) about one inch and a half in length.

In the construction of this part of the instrument its peculiarity consists. It is here flattened on its upper and under surfaces, so as to form a thin wedge, with two lateral slanting edges, and having a circumference gradually increasing from No. 2 to rather more than No. 10 size. Its upper and under surfaces are neither plane nor convex, but present a central rib, with two lateral hollows, so as to allow of but little hold upon these surfaces when the instrument is in use, and yet maintain its general wedge-like form. At the same time, the grooves also serve to contain some unctuous substance by which to lubricate it.

The lateral borders of this part of the instrument are ground to a smooth, stiff, blunt edge,—something like that of a sword,—not sharp enough to cut the finger or the lip, or even the tongue, when pretty firmly drawn over those parts, but readily severing any yielding though tough organic structure, such as leather, catgut, or even string, drawn over it with a sufficiently firm, gliding movement.

In using this instrument, its smaller end is passed through the stricture to be divided; and if this be carefully done, provided the orifice of the urethra has been previously dilated, if unusually narrow, no sort of cutting or even scratching of the urethra in front of the stricture takes place. The point of the instrument having been ascertained to be in the bladder by the freedom with which it can be moved about, the operator standing on the right side of the patient, (who is supposed to be recumbent,) and holding the handle of the instrument in his right hand, and the penis well drawn forward with his left hand, is enabled as I have found in practice, to pass in the instrument through the stricture, in a few seconds, with a surprisingly small amount of force. The instrument acts smoothly, without catch or jerk, and with a sensation to the operator as if it were penetrating something as soft as cheese.

The operation can, of course, be performed with or without chloroform, but to a patient who had no chloroform the slight pain caused by cutting was



less inconvenient than that produced by previous attempts at dilatation. In this case alluded to, the man—a retired Indian soldier, fifty-four years of age, and a patient in University College Hospital—had suffered many years from narrow organic stricture, accompanied with albuminuria. With some patience, after several weeks, the stricture was dilated so as just to admit No. 3. In this condition, on the 24th of February, it was divided by the operation above described, when only a few drops of blood escaped from the urethra. A No. 9 elastic catheter was then passed with the greatest ease. Six hours later, the catheter was removed. From that time the patient has passed his urine in a full stream. On the day after the operation, a No. 10, being tried, did not pass, owing, probably, to swelling of the sides of the canal; but on the seventh day, Nos. 8. 9, and 10, on the eleventh day, Nos. 9. 10, and 11, and on the fifteenth day, Nos. 10 and 11, slipped into the bladder at once, and were withdrawn without any grasping of the walls of the urethra. I may add that neither shivering nor any other constitutional disturbance followed the operation, and that the health of the patient, as might be anticipated, has improved.

The instrument now devised is evidently not a mere wedge-shaped dilator, and, I may remark, is wholly inefficient if its edges are left rounded or non-incisive. Neither does it act in the same manner as the fine-bladed sharp-edged urethrotomes now employed, whether these cut from behind forwards or from before backwards; for whilst, beginning from the internal surface of the strictured part, it divides all the hard resisting structure, it will merely stretch any tissue beyond, which is soft and elastic enough to yield. At all events, it would seem far less likely when deliberately used, to cut through the fibrous tissue of the corpus spongiosum urethræ than the thin sharp blades of existing urethrotomes. The very small amount of hæmorrhage following its employment favors such an opinion; and if the fact really turn out to be so, there will necessarily be less risk of urinary infiltration and abscess.

Whilst, however, the nature and extent of the incisions made by the instrument, and the permanency of the relief afforded by it, must be the subjects of future inquiry and experience, I may be permitted to direct attention in the present communication to its simplicity of construction, the facility and safety with which it may be used, and the difference between it and the ordinary urethrotomes.

This new urethrotome may, of course, be made of different sizes: but a smaller point than No. 2 might be less safe for ordinary purposes, and a smaller stem than No. 10 is not desirable, unless for a traumatic stricture in a boy's urethra, or in a case in which that canal is unusually narrow. I may further state that I have had a *straight* one made for the division of strictures in the fore part of the urethra, and also a curved *hollow* one, which acts as a catheter, and thus will determine in cases of peculiar difficulty the fact of the end of the instrument being really in the bladder, and will enable that organ to be injected with water, so as to remove its anterior wall away from the point of the instrument, and subsequently furnish evidence of the elastic catheter having reached its destination. I have also had the instrument made with the cutting edges both above and below, instead of at the sides; but, for the reasons which I need not now state, I have adopted the latter construction.

Finally, it is obvious that a like principle may be applied to instruments for dividing indurated strictures in other canals. It is also evident that it may be adapted to blades capable of being concealed or projected, or to a blade sliding over a smaller guide which has been previously passed.

Savile-row, May, 1860.

CLINICAL REMARKS, BY DR. BRINTON, AT THE ROYAL FREE HOSPITAL.

THE CURE OF TYPHOID FEVER.

The patient who occupied this bed, and is now about to be discharged cured, after a sojourn of only twelve days in the Hospital, exemplifies the practical value of a plan which I can earnestly recommend for the treatment of one of the most violent and deadly diseases of civilized life—typhoid fever.

I am afraid to say how old is the recommendation of emetics in the earlier stages of many febrile disorders. But Sir Henry Holland, who some years ago attempted, in his classical work, ("Medical Notes and Reflections,") to reinstate these agents in the position from which they had lapsed by an unjust neglect, especially pointed out their value, on various grounds, in such states.

My own views, however, are not the mere "*line upon line, and precept upon precept*," the due enforcement of which, in teaching an art like Medicine, would excuse the want of all originality. On the contrary, approaching this important therapeutic subject by a perfectly distinct path, I have been led to a theory and a practice quite as distinct from that of the older authorities, though by no means incompatible with it.

In studying the act of vomiting some ten years ago, I made some experiments, (The Lancet, 1853, "On the Treatment of Fever;" and "Cyclopædia of Anatomy," article "stomach,") which justified the conclusion that in the vomiting of certain drugs from the stomach, there was incidentally a specific determination of these drugs to the gastric and adjacent intestinal mucous membrane; by virtue of which afflux the vomiting they provoked had the object and effect of removing them from the system.

Extending this conclusion to the study of typhoid and other fevers, of which then and soon after I was treating numerous (about 100) cases of an almost epidemic character, I was led to recognize, in the earlier symptoms of the malady, a specific determination of the feverous poison to the great alimentary tract of mucous membrane; and especially to its upper part, as represented by the stomach. And as a corollary to this view, it seemed worth while to try the effect of agents which, like emetics, seemed, from my own researches, to determine an increased afflux of blood to this mucous membrane, as well as an increased secretion, and even excretion, from it.

In plain English, however dangerous the facility of such a merely humoral theory in general, there seemed to be special physiological reasons for its validity in this instance. On the other hand, trained by the watching of large epidemics, I believed myself little likely to mistake for fever any febricula or slighter malady; and could see no possible harm in repeating, artificially, an act which I had felt, in my own person, gave some temporary relief to the terrible symptoms which usher in a typhoid fever.

Without troubling you with the details by which I had slowly to convince myself that this measure was really successful, I venture to sum up their results:—

1. Emetics, early in fever, are most advantageous: with proper precautions, always harmless; in most instances, extremely beneficial; in some cases, positively cutting short the malady by a speedy cure.

2. They ought only to be given in an early stage, for which we may generally find an arbitrary limit in the first four days from that of the inaugural rigors, but which is practically better defined by the access and duration of the nausea or vomiting of this epoch.

3. Later than this period, they seem to have much less influence. Indeed, in many cases, it may be doubted whether they have any effect at all. While, on the other hand, the purging they often cause—a purging itself also decidedly useful in the outset of the malady,—obscures the symptoms subsequently requiring to be recognized and treated, by its resemblance to that diarrhœa (of intestinal lesion) which systematically occurs in typhoid fever, and to that diarrhœa incidental to typhus.

4. Ipecacuan seems on all grounds, the best emetic; and the wine, in ounce or two-ounce doses, the best preparation. Warm water should be plentifully taken to facilitate its action.

5. Once or twice a day for three or four days is the greatest number and frequency of vomitings I have found it advisable to induce.

These are the general claims of the emetic procedure. Let me remind you, however, to check them by some cautions and doubts. It would be wrong to receive and endorse the suggestions of even scientific Medicine on terms such as would secure acceptance for the outrageous nonsense of Homœopathy or any other quackery.

"*Were these really cases of fever?*" On this point it may be added, to the mere assertions of myself and other eye-witnesses, that not only was no characteristic wanting, but that some of the cases most successfully arrested were examples of unusual severity, occurring in circumstances permitting no doubt; cases from a whole family struck down simultaneously, or acquired by a traceable contagion.

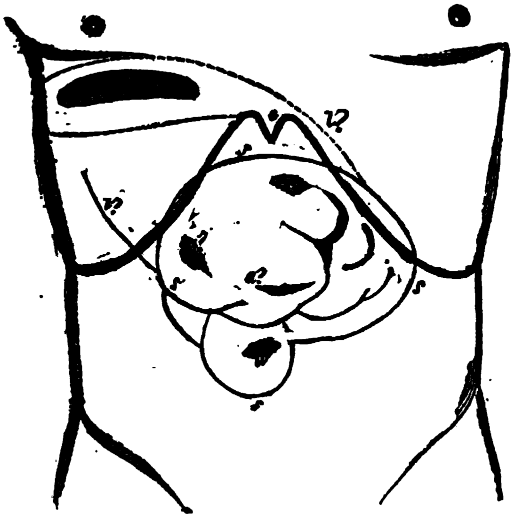
"*Are such cures intrinsically probable?*" When, like Professor Gullaway's pills, any remedies are asserted to cure all diseases with the same rapidity and certainty, the mildest of critics may be pardoned a doubt. And, conversely, the very failures of emetics are confirmations of their efficacy, by bringing their action under laws such as few of our best remedies quite interrupt or suspend. Emetics cure in the early, not in the late stage; cure when they help and imitate, not when they thwart and oppose the process of Nature; cure the young more easily than the old; and lastly, reduce the fever far more frequently than they absolutely cut it short, to some thing which, to vary the proverb, though it "can't be cured," *may* "be endured." Sometimes, indeed, after this imperfect cure, you can trace a kind of dwarfed or rudimentary counterpart of every subsequent stage of the fever; the malady being scarcely shorter than usual in point of absolute time, save in the complete ablation (so to speak) of the whole period of convalescence. The patient lies in bed, with a pulse of 80 or 90; cheerful but weak; asking to get up, but content to obey the prohibition to do so; requiring some food, but no stimulants, and scarcely more medicine: perhaps getting a little gentle diarrhœa—itself best left without special treatment—just enough to show that he *has* bowels, and that the malady has touched them. Between the fifteenth and twentieth days, however, he quietly rises from his bed, recovered.

The case of our patient discharged to-day shall be the pennyworth of bread to this intolerable deal of sack. A healthy lad of fourteen, he was sent in from a reformatory on the third day of unmistakable typhoid, with the face, tongue, pulse (130 per minute), and every other symptom of this disease, in its worst form. He has vomited freely for two days in succession, during which he was somewhat purged by the ipecacuanha also. On the third day after his admission, his pulse, which had dropped steadily, had fallen to 72 per minute. On the fifth day, his tongue peeled. The half diet and diaphoretics he has hitherto taken were now exchanged for full diet and quinine. To-morrow, the twelfth day from his admission, and the fifteenth of his fever, he goes out, I think we may say, *cured*—certainly recovered.

COMPLICATED CANCER OF THE STOMACH.

The patient, a dancing master, aged about eighty-five, of spare, but still vigorous frame, was admitted on the 5th of March, 1860. An occasional vomiting, latterly become frequent, and a sense of tightness in the epigastrium, increased by food (especially in any quantity), were the only symptoms he owned to. They dated from five months back. For the last few weeks, however, he had noticed an epigastric swelling, utterly painless to manipulation, but slowly increasing in size.

This swelling mapped out with pen and ink on the abdomen showed the annexed outline.



s, swelling distinctly lobulated or nodose, both in its outline and on its surface. *l*, liver. *n*, navel. *e*, ensiform appendix. *a*, *a ?*, *a ?*, points of the surface of the swelling at which adhesions were presumed, and questioned, respectively. *l ?*, *l ?*, very questionable outline of continuity between the swelling below and the liver above.

Now as to the diagnosis. The characters noted in this tumour—which, by the way, turned out to be decidedly sensitive to deep pressure above and to the left of its centre—left little doubt that it was cancerous. Let me add, too, that even without any detectible swelling, the patient's age, his face, the treacherous slightness and the significant accretion (or mode of growth) of his symptoms, would together have made me unhesitatingly assert a cancer of the stomach.

Thus, then, the symptoms pointed to the stomach. But did the physical signs also? In other words, was the cancerous swelling liver, or stomach, or both?

At first, finding that I could make out some intestine occupying a distinct interval between the liver (*l*) above and the swelling (*s*) below, I was inclined to think the whole tumour gastric. But then, again, as there was no symptom of ulceration having commenced on the mucous surface of the stomach, (as it generally does long before a quick-growing cancer attains this size), I thought the liver must form at any rate a large part of the mass.

By-and-bye came gastric ulceration, marked by grumous vomiting. Later still I thought I traced some continuity between the pushed-up edge of the liver in contact with the hypochondrium (*l*), and the tumour, as indicated by the dotted lines (*l?*, *l?*). But this was never distinct.

I have just been reminded by our house-surgeon of another detail of the diagnosis, which I dare say seemed at the time a perilous refinement. The cancer was alleged by me to occupy the small curvature.

Of many slight points which went to build up this conjecture, I will only adduce one here. The small curvature is the *hinge* of the stomach. And just as a cord, or any other fixature or embarrassment, would produce a minimum of disturbance at the hinge, and a maximum at the free edge, of a door; so, other things being equal, a gastric lesion attended with the minimum of symptoms is probably situated at or near the small curvature.

Lastly, as respects the prognosis and treatment, the comparative success of the latter was the failure of the former. A man of eighty-five, unable to eat and drink save in the smallest quantities, and these often vomited; a failing pulse; and a large cancerous mass of increasing size;—all these were data such as entitled one to doubt whether the patient could live beyond three weeks. Had I been asked the question respecting an affluent patient at an ordinary consultation, I should certainly have answered it by this conjectural limit; and should probably have been right.

But amongst the poor who crowd our hospitals, just as you can never tell how much they have wanted, so it is obvious that you are equally ignorant of what proper remedies, food, drink, nursing—in one word, comfort, can effect.

Constipation was relieved by a large cod-liver oil enema, which in such cases combines food and physic in a very desirable manner. Vomiting was checked at once, scarcely to return again at all, by a proper selection of the food as to quantity and quality. Note, too, that opium, quinine, and iron, in the form of pill, favored (rather than prevented) the immediate arrest of this formidable symptom. In three days the very small and frequent doses of milk and beef-tea hitherto given were exchanged for meat, wine, and, indeed, a rather generous diet. Slowly, however, his flesh and strength decreased; and he finally died, quite painlessly (so far as we could learn), about six weeks after his admission.

A flattened cancerous mass, of about the size of half a small orange, occupied the lesser curvature of the stomach at about its middle. The mucous aspect of this mass was an ulcerated surface, with bloody fungous edges and points. Its serous aspect adhered to the liver and diaphragm. The remainder of the swelling detected during life was formed by secondary cancer of the liver, the deposit being distributed in large nodules throughout the whole substance of this organ, but especially accumulated towards its anterior half. There was no adhesion save at the point marked *a*.

I cannot refrain from quoting a case closely akin to the above, and, like it, valuable as an illustration of this disease; against the diagnosis of which, health and longevity, both in the patient and his family, often count for as little as does the slightness of existing symptoms.

A healthy, temperate, handsome old gentleman, of eighty-five, whose parents had both lived to nearly 100 years, and who might himself have easily been taken to be scarcely sixty-five or seventy years old, was brought to me one morning by his medical adviser, who—he couldn't say why—was getting uneasy about him.

For some months past his appetite had become uncertain, and, on the whole, greatly diminished. He was paler, had lost flesh; very rarely, felt a little nausea; and latterly had some pain in the epigastric and interscapular regions.

These were all his symptoms. Physical signs there were none. Nevertheless, I felt bound to give my friend a decided opinion that the case was one of cancer of the stomach.

Under proper treatment his symptoms were palliated, or rather arrested, for a while—an arrest which the casual suspension of the remedies by the patient converted into a relapse attended by diarrhœa. In a few weeks I was consulted again. This time I found a perceptible thickening of the pyloric end of the stomach. In a few weeks there was an unmistakable tumour. A few weeks later he died with every sign and symptom of cancer of the stomach. No necropsy was allowed.

A CLINICAL EXAMINATION

OF THE

VALUE OF THE OPERATION OF TURNING IN LABOUR OBSTRUCTED THROUGH COARCTATION OF THE PELVIC BRIM.

By Robert Barnes, M. D.,

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(*Continued from June, No.—page 468*)

First Labour: Contracted pelvis; protracted labour; impending exhaustion; craniotomy. Second Labour: Turning; a living child.

Case 2.—(R. M. C——.) On the 2nd of February, 1858, my assistance was required at a protracted labour by a midwife of the Royal Maternity Charity. The patient, a pluripara, had always had lingering labours, and the last child was still-born. She was now in labour at term. She had been seen by a surgeon at ten P.M. the day before. The head was at that time presenting at the brim, and it was reported that she had been in labour some hours without progress. I saw her at three A.M. on the 2nd. The pains had then remitted; the patient was weak and restless, her pulse small. The head was in the first position. The sacral promontory projected so as to be easily reached by the finger. The antero-posterior diameter was estimated at 3·50″. The cranial bones overlapped considerably at the sagittal and lambdoidal sutures, the skull being somewhat flattened between promontory and pubes. But still the full transverse diameter of the head had not entered the strait, nor could it do so unless under the influence of considerable additional force. A fair degree of uterine contraction now returning, I waited an hour; when, finding that the force required could not be suppled by the patient, that there was no advance, that symptoms of exhaustion were appearing, and being satisfied that the forceps would not deliver a living child, I lessened the head, and delivered by crotchet. The extraction was easily accomplished; for the moment the capacity of the head was diminished, strong expulsive action set in. The placenta was removed in five minutes, and the uterus contracted well. The patient recovered favorably.

Second Labour.—The woman had disregarded my injunction to have labour brought on prematurely in the event of another pregnancy, so that on February 15th, 1859, she being in labour at term, my assistance was again required. When I saw her the os was fully expanded, head and foot presenting. As the patient's strength was still good, I determined to deliver by turning. The version was effected under chloroform without difficulty, the presenting leg being brought down. The head was jammed for twenty minutes in the brim between the promontory of the sacrum and the symphysis; it was dragged through under considerable force, emerging into the cavity with a sudden slip. The child was born asphyxiated, but in half an hour cried loudly. It was not of large size; the head was much compressed at the sides. Mother and child did well.

Commentary.—This case gave me both satisfaction and surprise. I little expected that a living child would be born after the head had been subjected to such great and contracted compression. Had not the head been of somewhat less than average dimensions, the result would not, I believe, have been so favorable. Still in this case, as in No. 1,* all the conditions of safety to the mother and child could be secured by bringing on labour at the end of the eighth month, and resorting to version should the head not freely enter the pelvic brim. Here were a conjugate diameter of 3·50″, and a head below the average dimensions. In most instances, the natural forces, if of ordinary vigor, might overcome a disproportion of this kind. In this particular case the natural forces were insufficient, and it became necessary to choose between the forceps, turning, and craniotomy. I postponed craniotomy as the last resource. It is possible that the forceps might have been successful: but cases which I shall hereafter relate will show that, except under special circumstances, this instrument will not effect delivery obstructed through disproportion, with less risk to the mother or with more safety to the child, than can be attained by turning. The last operation could place the child's head in the most favorable position for entering the contracted brim. The hold obtained upon the legs and trunk would give the obstetrician a degree of power which neither the natural forces, nor the forceps, nor both combined, could supply. The power so obtained, when exerted, would equalize the transverse diameter of the child's head and the conjugate diameter of the pelvis most directly, and with the least possible violence. Brought into the brim base foremost, the plastic skull most easily adapts itself to the rigid distorted contour. The compressing force, first bearing upon the skull in its extreme transverse diameter, soon lessens this because above the promontory and on either side there is no obstacle to the expansion of the skull. On the other hand, the forceps cannot exert the requisite degree of compressing force under equally favorable conditions. The compression cannot be applied directly to the transverse diameter of the skull ; it must fall either obliquely or in the occipito-frontal diameter. In either case, the compression, by lessening the occipito-frontal diameter, must increase the bulging of the bi-parietal diameter, and bring this—the obstructing part—into more violent impaction, between the promontory and symphysis. The instrument thus adds to the very difficulty which it is sought to overcome, and calls for a supererogatory increment of force to balance that excess of resistance which it has itself created.

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* The Lancet, June No., page 490.

Turning has this great advantage, that it brings no artificial difficulty to enhance that difficulty which already exists.

The case before us does not mark the limit of the applicability of turning in contracted pelvis. It is true that with a conjugate diameter of 3·50″ and a small head, the passage through the pelvis was not effected without some difficulty, and some risk to the child's life. But experience has proved that a living child of full size may be extracted through a yet smaller pelvis with safety to the mother. We must therefore pursue the inquiry, and study fresh cases, before we can determine the limits of the conservative application of turning in contracted pelvis.

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NOTES ON

ATROPHY AND DEGENERATION OF THE ARTERIES, ETC.,

BY EDWIN CANTON, ESQ., F.R.C.S.,

Surgeon to the Charing-Cross Hospital, and Lecturer on Surgical Anatomy.

(*Continued from May No. page 386.*)

PART IV.

In the cases I have related of atrophy and degeneration of the arteries arising from indulgence in intemperate habits, I have not mentioned the state of the arteries of the brain ; but, though unexamined in the above instances, I have commonly found these vessels to be affected in the same manner as those of the trunk and limbs in examples of chronic inebriety. Dr. Huss (*loc cit.* p. 11) has frequently observed, also, another important change in the cerebral vessels, "usually, but not always, in company with atheroma of the larger bloodvessels of other parts. There is a dilatation of the arteries, both large and small, which ramify in the cerebral substance, so that on slicing the brain they appear of larger size than natural, while the coats of the larger bloodvessels likewise become brittle." In a case described by Mr. Henry Lee[*] of an intemperate man, aged fifty-six, with a distinct arcus senilis in each eye, and who was admitted into King's College Hospital with gangrene of the left foot, from which he died, it was found at the autopsy—besides atheroma of the aorta in the thorax and abdomen, pelvis and lower extremities—that the arteries at the base of the brain showed some distinct patches of atheromatous deposit.[†]

It is well known that an atheromatous state of the arteries strongly predisposes to the occurrence of aneurism ; and in regard to the frequency of this latter disease in intemperate persons I may quote the valuable testimony of Dr. Crisp,[‡] who observes :—"Aneurism is, I believe, more frequent in England than in any other country. Temperature has but little influence in the production of the disease ; but when the habits of the people are considered—their great industry, the violent and continued exertion they are accustomed to use, as well as their greater addiction to the use of ardent spirits—the cause admits of a ready explanation. Soldiers and sailors, especially, are more liable to aneurism than any other class ; and they are called upon, often, when the heart's action is increased by the use of alcohol, to make sudden and violent efforts. Amongst agricultural laborers, on the other hand, who (though subject to great bodily fatigue) generally lead a life of temperance and have their minds free from anxiety, the disease is comparatively rare."

When we remember the condition in which some of the important organs of the body are found after death in habitually intemperate persons ; the general implication of the coats of the bloodvessels ; the unhealthy condition of the blood itself ; and, moreover, the change so frequently to be noticed of the fibres of the heart, can we wonder at the feeble chance of success presented to the surgeon who undertakes the treatment of an aneurism[§] under such untoward circumstances ? And, in the abnormal state described of the circulatory apparatus and its contents, can we be surprised at the occurrence of hæmorrhage, arteritis, apoplexy, or sudden cessation of the heart's action ? Can any condition be more subversive of all those processes whereby the nutritive functions should be duly exercised? The life of the drunkard hangs, indeed, on a thread, and his frail existence may be suddenly cut short by the last contractile effort of a fatty heart,[*] or, where the nutritive and reparative powers are so greatly in abeyance, the slightest injury may be rapidly followed by an equally fatal result. Dr. C. Wilson[†] relates the case of a drunkard, in the prime of life, who had been engaged in his usual avocations till a few days previously, when he became indisposed, and was found lying extended on the floor of his apartment, cold and rigid, having evidently been dead for several hours. On assisting his medical man at the post-mortem examination, the liver was found so much enlarged, especially on its upper convexity, that it extended as high as the fourth rib, its whole substance being of a yellow-ochrey color, and friable in consistence, or in other words, presenting the characteristics of what has been termed the fatty liver. The more immediate cause of death, however, was attributable to the state of the heart, which was *softened*, *easily lacerable*, and contained fibrinous concretions. Dr. Ormerod[‡] has recorded the following instance:—A strong man, between thirty and forty years old, addicted to very hard drinking, received a slight injury of the head. He paid no attention to it, and continued his work for four days; then having headache, and feeling ill, he laid up, and left off all strong drink. In three days signs of delirium tremens came on, and he was brought to the hospital. In the course of the second day after the beginning of these symptoms, while they were pursuing an ordinary course, he took 140 drops of laudanum, but no beer or spirits until the evening, when, the opium seeming to be sufficiently administered, brandy was given him, and beef-tea. In about two hours he went to sleep, and he remained dozing and apparently improving in condition all night. But, in the morning, a new nurse came to him, who wished to change his bed linen. For this purpose she took him out of bed and sat him in a chair; but he had hardly been removed when he seemed dying, and he died before he could be again placed in bed. In his body, the only changes were fatty degeneration of the heart and liver. Another case is detailed by Dr. Ormerod, where a man of only thirty four years of age, of notoriously intemperate habits, and who labored under anasarca and ascites, died suddenly from fatty degeneration of the heart.

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[*] Brit. and For. Med. Chir. Rev., July, 1857, p. 226.

[†] "With the obvious exception of the arcus senilis, which, from being observed so readily during life, and especially where the irides are darkly colored, is by far the most frequently noticed form of degeneration, the atheromatous destruction of arteries is the most generally discovered form of decay."—W. F. Barlow "On Fatty Degeneration," p. 70. Lond. 1853.

[‡] A Treatise on the Structure, Diseases, and Injuries of the Bloodvessels, p. 118. Lond. 1547.

An interesting case is related by Mr. Haynes Walton in the Transactions of the Pathol. Soc. Lond. (vol. v. p. 109, 1854) of aneurisms existing simultaneously in the subclavian, femoral and popliteal arteries, where the coats of the vessels were atheromatous and bony. The age of the patient (male) was sixty-six.

Mr. Barlow (loc. cit. p. 71) mentions the case of a female who died under the care of Mr. Philips, in the Westminster Hospital, in whom three aneurisms were found.

[§] Dr. Baillie remarks, that "the arteries near an aneurism are diseased to a greater or less extent in different persons ;" but he does not recollect a single instance in which they were totally free from disease.—Morbid Anatomy. 8th Edit., p. 16.

Dr. Watson[§] says: "There is but one morbid condition which, since my attention was directed to it, I have found constant in persons dead of delirium tremens, and that is, a *remarkably soft, pale, and flabby state of the muscular tissue of the heart.*"

I have alluded to the unhealthy condition of the blood, in which Huss (*loc. cit.* p. 19) states oily particles to abound in that portion of it remaining in the heart and larger arteries in the bodies of drunkards; and this fluid, when rubbed between the fingers, gives the same feeling as though it were fat. This increased amount of fat in the blood (*pionœmia*) is said by Wedl[*] to confer on the serum a whitish, milky discoloration, and the floating fat-globules may be easily recognized under the microscope.

The blood, in addition to presenting these peculiarities in drunkards, is found to be defective in its usual amount of fibrine, and a lower than the normal grade of plasticity prevails: the corpuscles appear to be diminished in number, and the quantity of the aqueous parts is increased; there is less than the ordinary estimate of hæmatine present, and the carbon is superabundant. Scharlan has found as much as 30 per cent. more carbon in the blood of a drunkard than in that of a healthy man.

Beyond the fact of the direct passage into the blood of the alcoholic fluid received by the stomach the accumulation of hydro-carbonaceous matter in it may be accounted for by the diminution of the amount of carbonic acid and water expelled from the lungs by those under the influence of this stimulus. "But," observes Dr. C. Wilson (*loc. cit.* p. 164), "physical and even mental exertion, increases the degree of exhalation of the carbonic acid by the lungs, and therefore operates also by increasing the power of resisting effects. Hence the drunkard, reduced to inaction, loses yet another of his grounds of vantage. Fasting, on the other hand, causes less carbonic acid to be exhaled, and fasting increases the proneness to intoxication and the mischief of its results."

The generally diseased state induced in persons addicted to intemperance has been so jealously cared for by those interested in life assurance, that statisticians have made the rate of mortality in regard to them an object of special attention; and Nelson[†] has found that at the term of life from twenty-one to thirty, or in the first vigor of manhood, the mortality of drunkards was upwards of five times, and from thirty-one to fifty upwards of four times, that of the general community at like ages; and he remarks—"If there be anything in the usages of society calculated to destroy life, the most powerful is, certainly, the inordinate use of strong drinks."

"It cannot be too widely known through the length and breadth of the land," observes Mr. Smee,[‡] "that though during the last few years the most severe competition has taken place between the different life assurance companies for business, not one has dared to insure intemperate lives, or lives which have been intemperate, at any increased rate. No reasonable rate meets the case. It is in vain that the drunkard returns to propriety; he can never altogether erase the mischief; and although much may be done by great perseverance and skill, he never can altogether bring himself into a healthy state, or be regarded as a thoroughly healthy life. *The frame of the drunkard is debilitated throughout*, and he sinks by pneumonia, disease of the liver, or other malady depending upon debility. which cuts off his career prematurely. Insurance companies abhor the drunkard, as a risk far too great and uncertain to be estimated and safely considered. If the career of the drunkard be watched, it is astonishing how soon he passes away, as if the voice of Nature exclaimed, 'Cut it down! why cumbers it the ground!'"

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[*] "These states of the heart (fatty degeneration and fatty deposit)," observes Dr. Habershon, "arise, in many instances, from degeneration of the vessels (the coronary) which supply the organ with nutritive fluid, and frequently they are the concomitants of the ordinary changes of advanced life, but as often spring from other causes, as great mental anxiety, or *intemperance.*"—On the Injurious Effects of Mercury in the Treatment of Disease, p. 35. Lond., 1860.

[†] The Pathology of Drunkenness, p. 75. Edin., 1845.

[‡] London Medical Gazette, 1849.

[§] Lectures on the Principles and Practice of Physic, vol. i. p. 390. London, 1843.

[*] Rudiments of Path. Histol. p. 45 (Syd. Soc. Transl.)

[†] Journal of the Statistical Society, vol. xiv., p. 200

[‡] General Debility and Defective Nutrition, p. 25. Lond., 1849.

"Human life is rarely abbreviated by the mere unassisted disorders of nature. Ignorance of our bodily constitution and thoughtlessness of the means of preserving it are the main causes of shortening our existence. And if either from ignorance or carelessness, or from the desire of present gratification, we will not take the little trouble that the preservation of health and the prolongation of life require, we are ourselves the authors of those abbreviations of existence under which we suffer, and a coroner's jury might bring in a verdict against us of slow suicide committed under the influence of habitual insanity."—J. Pinney, "The duration of Human Life, and its three Eras," p. 43. Lond. 1856.

In the cases I have related, where there was found after death marked degeneracy of the heart and arteries in the bodies of drunkards, and corresponding change in other organs, there existed in the corneæ well-developed circles of fatty degeneration; and when we consider the great involvement of the other tissues in this alteration, and the degraded nutrition of all, it might not unreasonably, be anticipated that the eye would afford corroborative testimony to the general evidence of ravages so wide in extent and deadly in form—ravages which have rapidly reduced youth to age, and are hurriedly leading the "artificial old man" to premature decrepitude and the tomb. "The arcus, or circulus senilis of the eye," observes Dr. C. J. B. Williams, "almost always indicates premature age, brought on by the wear and tear of excessive mental anxiety, or by *fast living*."

(*To be continued.*)

A Mirror

OF THE PRACTICE OF MEDICINE AND SURGERY IN THE HOSPITALS OF LONDON.

Nulla est alia pro certo noscendi via, nisi quam plurimas et morborum et dissectionum historias, tam aliorum proprias, collectas habere et inter se comparare.—MORGAGNI. *De Sed. et Caus. Morb.* lib. 14. Proœmium.

CHARING-CROSS HOSPITAL.

DISARTICULATION OF THE HIP-JOINT FOR EXTENSIVE DISEASE IN THE STUMP, AFTER TWO PREVIOUS AMPUTATIONS IN THE THIGH; FATAL RESULT.

(Under the care of Mr. HANCOCK.)

No.	Date of Operation.	Operator.	Hospital.	Sex.	Age.	Nature of Disease.	Result.
1	1852	Mr. Hancock.	Charing-cross.	M.	32	Severe compound fracture of leg, thigh, and arm; erysipelas and gangrene on 17th day.	Death immediately afterwards, from shock.
2	1853	Mr. C. Guthrie.	Westminster.	M.	50	Malignant disease of femur.	Death on 2nd day, from exhaustion and hæmorrhage.
3	1854	Mr. Adams.	London.	F.	26	Fibro-cystic disease of leg and thigh.	Death on 12th day, from diarrhœa, &c.
4	1855	Mr. Erichsen.	University-College.	M.	26	Severe compound fracture of thigh, very high up.	Death 2 hrs. afterwards.
5	1855	Mr. Tatum.	St. George's.	M.	17	Medullary cancer of femur.	Recovery.
6	1856	Mr. Curling.	London.	F.	40	Medullary cancer of thigh.	Recovery, but died ten months afterwards of internal disease.
7	1856	Mr. Hancock.	Charing-cross.	M.	24	Extensive disease of thigh and entire femur.	Recovery.
8	1857	Mr. Stanley.	St. Bartholomew's.	M.	52	Medullary cancer of femur.	Death 2 hours afterwards, from hæmorrhage.
9	1857	Mr. Lane.	St. Mary's.	M.	29	Severe and extensive injury to thigh, groin, and périnæum.	Death in 5 hours, from shock.
10	1860	Mr. Hancock.	Charing-cross.	M.	35	Disease of stump in the thigh, after two previous amputations.	Death in 12 hours.

THE removal of the entire leg at the hip-joint is a very rare operation in civil practice. During the past eight years it has been resorted to ten times, as shown in our Table above, at the greater number of which we were present. Seldom, indeed, does it fall to the lot of the surgeon to disarticulate the hip even twice. Mr. Liston and Mr. Syme performed the operation twice; now, however, we have to notice an instance in which it was performed for the third time by Mr. Hancock, for extensive disease of the stump, remaining after a second previous amputation in the thigh. The case is a peculiar one, and almost unique, so far as we are aware. The removal of the remains of the limb was attempted for the purpose of prolonging life even for a few days, so hopeless had it become from the state of disease present. It makes the tenth example in our hospitals within the past eight years, and all of them have been recorded in the pages of our "Mirror." Our space will only permit us to give them in tabular form, where it will be seen that out of the whole number three made a recovery, one of these dying ten months afterwards of non-malignant internal disease. Where the operation was resorted to for extensive injury (Nos. 1, 4, and 9), death very quickly followed, from shock and exhaustion. In the others, wherein the thigh had become involved by malignant growths, fair hopes were entertained of the possibility of recovery *before* the removal of the limb. But it would seem that the dismemberment of such a large part of the economy cannot be attempted with ordinary impunity. No. 7 (in which recovery ensued) we well recollect was a most unpromising case, more so than any of the others in which disease alone called for the operation, and, notwithstanding, the patient did well.

Remarks.—In No. 1, the fracture was found to extend into the hip-joint, and the operation was performed under almost hopeless circumstances. In Nos. 2, 3, 4, 5, 9, and 10, antero-posterior flaps were made by transfixion; whilst in the others, the operation was modified according to the circumstances of the case. Thus, in No. 6, a long posterior flap only could be made, from the extension of the tumour upwards in front. In Nos. 7 and 8, the anterior flaps were made first, and the femoral artery was tied.

As we said before, Mr. Hancock's case is probably unique, for in the history it would appear that the bone was considerably inflamed, particularly around the medullary canals, but that there was neither necrosis nor caries. The excessive formation of bone in both previous amputations no doubt prevented the healing of the wound, and the condition of the remains of the femur was very remarkable and extremely rare.

A. B——, aged thirty-five, was admitted on the 19th of February, in a very emaciated and worn condition, with the hope that something might be done to save his life. He had undergone two consecutive amputations of the thigh at St. Bartholomew's Hospital: the first by Mr. Lawrence, in Dec. 1858; and the second by Mr. Coote, in Aug. 1859. The former was effected immediately above the knee for a large abscess at the posterior part of the joint, which was wholly destroyed. He did not progress well, and some months later the second amputation was performed higher up. The result was equally unfortunate, for supposed caries attacked the remains of the femur, with extensive suppuration and sinuses, which had produced complete prostration and hectic fever. The stump was conical, and from its end projected a swollen-looking bone, covered by granulations; two ragged ulcerations at the outside of the limb, and one on the inside just below the groin, kept up a constant discharge of dark-colored pus. As he was likely very soon to sink from hectic fever and exhaustion, it was deemed advisable to give him a chance by amputation at the hip-joint, which was accordingly performed on the 25th of February, and the remains of the thigh were removed by transfixion, the anterior flap being made first, and the posterior last. No unusual circumstance occurred at the operation, beyond some free hæmorrhage—not from the femoral artery, for it was obliterated, but from several other enlarged vessels, which had to be ligatured as soon as the anterior flap was formed. Although the man was very low, he rallied shortly afterwards; but about two o'clock on the following morning, faintness came on, from which he rapidly sank.

Condition of the stump of the femur after amputation at the hip (as examined by Mr. Barwell).—During life, the end of the bone had projected from the stump about an inch and a half, and was covered with granulations. This end was found, on examination after amputation, to be much enlarged; it was, in fact, chiefly a growth from the end left after the amputation last performed by Mr. Holmes Coote at St. Bartholomew's Hospital. This end was larger in circumference than the rest of the femur, but consisted of apparently healthy, hard, osseous tissue. On the inner side of the femur, three inches from its truncated end, was another growth, larger than a walnut, of firm bone. The external examination showed no other morbid condition. The femur was split from end to end, laying open its medullary cavity, in which there was greater vascularity than usual; and in parts the medulla was suppurating. The substance of the bone was rather redder than normal, and its thickness seemed slightly increased. In this view the relation of the addition bone at the end of the stump could be more distinctly traced; it appeared to grow chiefly from the inside of the cavity and the end, hardly from the outside of the bone. In front, and to the outer edge, it projected less than behind and to the inner side, where it grew out and overhung, forming a mushroom-like cap to the end of the stump. The head of the bone and the joint appeared healthy. The only abnormal condition—that which appeared to prevent due healing of the stump after the previous amputation—appeared to be this development of new bone at the end. Ordinarily, after amputation, osseous substance is thrown out at the edge of the sawn bone, closing in the medullary tube; and then a process of absorption commences, rounding off the truncated end. In this case, it appears that the first process—the formation of bone—continued too long; absorption did not set in, so that new bone continued to grow, and projected at last out of the amputation wound.

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KING'S COLLEGE HOSPITAL.

CHRONIC DISEASE OF THE ANKLE-JOINT; AMPUTATION OF THE FOOT BY PIROGOFF'S OPERATION; RECOVERY, WITH A GOOD STUMP.

(Under the care of Mr. Fergusson.)

The amputation at the ankle-joint which goes by the name of Pirogoff has now been performed several times, and promises to be a successful one, although at one time surgeons were doubtful whether the portion of the os calcis remaining behind in the flap would preserve its healthy condition. Experience has proved so far that the bone has preserved its integrity, unless the disease had likewise extended to it at the time of the operation. The nature and principles of the operation have been already described in previous "Mirrors," and it is not necessary that we should recapitulate them. We now record another instance, in which it has turned out very well, at King's College Hospital, the operation having been done in the usual way as recommended by Pirogoff, slicing off the lower end of the tibia and fibula—a feature which has been practised, we believe invariably by London surgeons, whether recommended by Pirogoff or not. The method of performing the operation *without disarticulation*, as was first practised by Prof. Pirri, of Aberdeen, and dwelt upon by Dr. Eben Watson, in his "Clinical Remarks," has not been attempted, to our knowledge, by any London hospital surgeon. The advantages of shortening the operation by this proceeding, as set forth by Prof. Pirri, together with the facility of its performance, are well worthy of being borne in mind, although Pirogoff's operation, *per se*, is much more speedily done than is Mr. Syme's. We must admit, nevertheless, that we have seen some most excellent stumps as the result of Syme's operation, one, too, that has been already well tested by experience wherein they have been under observation for several years. This cannot as yet be said of Pigoroff's. Further time is, therefore, necessary to pronounce a positive opinion on its advantage over Syme's. If the report be true that Pirogoff has abandoned his operation (although it is still much practised by Russian surgeons), it was no doubt in consequence of his fears that the remains of the os calcis would die, and the results thus prove nugatory.

For the notes of the following case we are indebted to Mr. Francis Mason, house-surgeon to the hospital:—

S. H——, admitted on the 24th of January last, under the care of Mr. Fergusson. The patient is a resident of Greenwich, and says that about three years ago she slipped while going down stairs and sprained her left ankle. Of this she took little notice, as it seemed to improve somewhat with rest. Soon after this accident, however, she was attacked with rheumatic fever, affecting particularly the sprained foot. She gradually got the better of this; but the affected part remained exceedingly weak. About two months afterwards, the foot became very much swollen and tender, and she sought the advice of various medical men without gaining any benefit; abscesses formed and burst in the neighborhood of the ankle-joint, causing considerable constitutional disturbance. She says her sleep has been much disturbed by pain and starting in the limb. This state of things has existed to a greater or less extent up to the present time. The patient on admission was a pale, weakly-looking woman, with an expression of countenance indicative of much suffering. She says she had good health up to the time of the accident, two years ago; is married; has no children; and there is no family history of similar disease. On examination, she was found lying on her right side (this being her only comfortable position); the left thigh was flexed on the trunk, and the leg flexed on the thigh. The affected foot was of a reddish color all over, and pointed downwards; the heel being drawn up, the ankle-joint seemed anchylosed, but this could not positively be ascertained as manipulation gave such exquisite pain. A sinus, discharging unhealthy matter, was found on the outer side of the ankle-joint, and another on the inner side of the joint, each leading to diseased bone.

Jan. 28th, 1860.—Mr. Fergusson determined to remove the foot by the operation proposed by M. Pirogoff. The patient being narcotized, the ordinary proceeding was adopted to effect this purpose, and she was removed to bed.

29th.—The patient has had a restless night, the shooting pain having been very violent; pulse 130; tongue rather dry.

30th.—Much improved; sleeps well with an opiate; wound dressed to-day and looks remarkably healthy; discharge profuse; bowels regular; tongue cleaner; pulse 110.

Feb. 6th.—Is much better in health than before the operation; stump looking well; ligatures of anterior and posterior tibia came away to-day; she sleeps well, and is disturbed only by the starting of the limb; has left off the opiate for three nights. The house-surgeon put the limb into a Salter's swing, which the patient finds very comfortable.

20th.—Going on satisfactorily; appetite good; tongue clean; bowels regular; pulse 86. The stump is rapidly cicatrising and promises to be a very useful limb.

UNIVERSITY COLLEGE HOSPITAL.

SEVERE INJURY TO THE LEG AND ARM FROM A RAILWAY ACCIDENT; AMPUTATION OF THE THIGH JUST BELOW THE TROCHANTER; DEATH FROM SHOCK SOME HOURS AFTERWARDS.

(Under the care of Mr. Marshall.)

The following case (for the notes of which we are indebted to Mr. Wm. Hickman, late house-surgeon to the hospital) presented such injuries as almost to require amputation of the limb *at* the hip-joint, but it was removed immediately below the trochanter, just leaving, as it were, the articulation intact; the incisions being made to suit the necessities of the case, and the main vessel being tied before the operation, so that as little blood as possible might be lost. Notwithstanding this, however, death ensued from shock. The present and preceding cases form an interesting series of amputations performed for different purposes in the lower extremity.

John S——, aged thirty-six, a healthy man, of temperate habits, whilst engaged on the London and North-Western Railway shunting some trucks, was knocked down and run over by an engine. He was at once brought to the hospital, where he arrived about six A. M., Nov. 22nd, one hour after the accident.

On admission, the man was under the influence of severe shock; the surface cold and pale, and the pulse almost imperceptible. The right leg was found to be completely smashed, and the skin stripped off the front of the thigh to within a few inches of the groin the muscles of the thigh being exposed and a good deal bruised. The right arm was also completely smashed up to the elbow, the fingers dangling at the ends of long shreds of skin. There was no bleeding from either part.

He was wrapped in hot blankets, and given brandy; and at eight o'clock, as the pulse had become stronger and the surface warm, and he was beginning to complain of pain, Mr. Marshall (who had been sent for) determined to amputate.

On looking at the thigh, it was seen that the operation by antero-posterior flaps was quite inadmissible, the skin having been split up along the centre of the front of the thigh to about two inches from Poupart's ligament, and separated laterally from the muscles nearly round to the back. Mr. Marshall accordingly adopted the following procedures:—He first put a ligature round the femoral artery, having merely to turn aside the sartorius for that purpose; he then made an oval incision through the skin, commencing with the point of the oval in the centre of the front of the thigh where the skin was already split up to; the skin was then drawn well back, and the muscles divided as high as possible by a circular incision down to the bone, which was sawn across close to the small trochanter. There was very little bleeding, not more than two ounces of blood being lost altogether; one large artery spouted when the incision was made through the muscles, but was immediately stopped by the fingers; about twelve ligatures were applied. The edges of the skin appeared to come well together along the middle line of the limb, and formed a good stump.

The man had been put under the influence of chloroform previously to the operation, and as soon as the thigh had been amputated it was found that he was in a state of great collapse—the pulse flickering and hardly to be felt; any further operation on the arm was consequently deferred, and the patient at once removed to bed and given brandy, &c. He came round a little after a time, but never thoroughly rallied, and died at three o'clock, P.M., ten hours after the injury and seven after the amputation.

On examining the body after death, no internal injuries were found. The femoral artery was ligatured half an inch below the profunda, which arose rather high, and it was this latter vessel which spouted during the operation.

ST. BARTHOLOMEW'S HOSPITAL.

STONE IN THE BLADDER OF A GIRL; REMOVAL BY DILATATION AND INCISING THE URETHRA UPWARDS.

(Under the care of Mr. STANLEY.)

WHEN recording examples of stone in women and female children, we have generally adverted to the fact of the rarity of the affection in their sex, at least in London, as contrasted with males: for amongst the large number of patients annually cut for stone in our hospitals an isolated instance only is here and there met with in females. Most of these have been noticed in our pages, the majority occurring in little girls, and but few of them in adults.

We have often heard the question asked why women are so much less subject to stone than men. Mr. Coulson, in his work on "Lithotomy and Lithotrity," gives the mean result in a number of tables as one woman to every twenty cases of males; but he believes the proportion to be greater than this, for the reason that delicacy prevents numbers of females laboring under urinary diseases from applying for medical relief. However true this may be with regard to adults, it will hardly apply to children. But we think an explanation is afforded by the fact of the facility with which a stone passes from the female bladder, owing to the shortness of the urethra and its general elasticity, and the almost impossibility, therefore, of the calculus remaining to attain a large size. We know, also, that sometimes even pretty large stones pass spontaneously from the female bladder, and are assisted in their exit by the finger of the patient.

We now record two examples, in girls aged thirteen and six years respectively, from each of whom a stone was removed by dilatation and incision of the mucous membrane. In the first case, Mr. Stanley performed dilatation with a Weiss's dilator *after* dividing the upper and anterior part of the urethra for half an inch, cutting towards the pubes, and removed a stone as large as a pigeon's egg. This direction of the incision is that practised by Sir Benjamin Brodie, and occasionally adopted by other surgeons. Thus, Mr. Hillman in one case (already referred to) incised the urethra directly upwards, in direction of the symphysis pubis, to the extent of a quarter of an inch, and the stone was readily extracted.

In the second example, Mr. Canton grasped the stone by means of a small pair of nasal polypus forceps, in its withdrawal gently dilating the urethra; but he was obliged to divide a small portion of the lower wall of the urethra to permit of complete extraction. No bad consequences resulted.

For the notes of the following case we are indebted to Mr. Rogers, house-surgeon to the hospital:—

E. H——, aged thirteen, a sallow cachectic, and rather idiotic-looking child, was admitted into Sitwell ward for great pain in micturition, and pain in the groin and back. Her mother stated that for the last twelvemonth she had been falling off, and had become more and more emaciated. No pieces of gravel had ever been passed. The child had had sudden stoppage of urine, but this apparently, was more from pain than real obstruction. After her admission the specific gravity of the urine was 1018, but it contained neither mucus nor pus. She was placed on a nutritious diet; steel wine was given; and she was directed to have a hip-bath every night. Under this treatment she improved, became more cheerful, and suffered less pain. In January last, however, the pain returned, and was not now relieved by the warm bath. The urine was high-colored, and mixed with thick ropy mucus, pus, and abundance of triple phosphates. A calculus was now detected.

On February 1st, nitric acid, with decoction of pareira brava, were ordered. Under this treatment, with opiates at night and the continued use of the hip-bath, she again improved. On the 19th, cod-liver oil was ordered. She continued to gather strength. The urine improved very much, containing less pus and mucus.

On March 1st, Mr. Stanley performed lithotomy. The girl having been placed under the influence of chloroform, a grooved staff was introduced into the urethra, with the groove upwards. With a blunt-pointed bistoury passed up the groove of the staff, Mr. Stanley divided the parts above the urethra for about half an inch, cutting in a direction directly upwards towards the pubes. By this incision the lower border of the triangular ligament was freely divided; but Mr. Stanley stated that he did not cut the sphincter of elastic tissue immediately surrounding the neck of the bladder. The incision having been made, the next point was to introduce the dilator without injury to the wound. This was done by turning the staff with its groove downwards, so that a Weiss's dilator could be slipped along the latter. The dilatation was accomplished slowly, and with great care. As soon as the dilatation had proceeded sufficiently to admit of the finger being introduced, the instrument was withdrawn. The stone was now easily detected, and was by means of a pair of forceps, but with some difficulty, extracted. At first the soft coating of the calculus gave way, but the whole mass was finally removed. The calculus turned out to be lithate of ammonia, and was nearly as large as a pigeon's egg. A piece of wet lint was placed on the wound and poppy fomentations were directed to be applied to the abdomen. She improved rapidly, and by the 12th regained completely the power of retaining her urine. Her recovery was a good one.

CHARING-CROSS HOSPITAL.

STONE IN THE BLADDER OF A GIRL AGED SIX YEARS; EXTRACTION; RECOVERY.

(Under the care of Mr. CANTON.)

HARRIET J——, aged six years, a pale and emaciated child, a native of Scotland, but has lived in London during the last four years. She cut her teeth at an unusually late period, and with very great difficulty, and was unable to walk alone until she was two years of age. The mother states that her daughter was always a long while in passing her urine, but it was not until six weeks ago that she complained of pain on micturition; the flow of urine was then noticed to be occasionally stopped with abruptness. Complete retention, for the first time, occurred two days previous to her admission into the hospital, but was overcome by the use of a warm bath and the administration of a dose of castor oil. Retention took place again the next day, but the above measures having been resorted to without success, the patient was placed under the care of Mr. Canton. Seen at first by Mr. Travers, the house-surgeon, (to whom we are indebted for these notes,) the child presented a pale and most anxious expression of countenance, which had a sickly, sallow hue; the body was much wasted; great pain was complained of in the lower part of the abdomen, and especially at the pubic region, where the bladder was found to be much distended, no urine having been voided for thirty hours previously The warm bath was resorted to, and, with some difficulty, a catheter was introduced, which pushed before it into the bladder some obstructing substance, when about a pint of very opaque fluid was drawn off. When seen by Mr. Canton, a calculus was detected in the bladder, and removed by him in the following manner:—A small, curved pair of nasal polypus forceps was readily introduced into the bladder through an unusually wide urethra, and the stone at once grasped between the blades of the instrument; gentle, steady, and continued traction was exercised, and by degrees the urethra became more and more dilated; but as difficulties occurred in bringing the calculus actually to the surface, Mr. Canton divided a small portion of the lower wall of the urethra with a curved bistoury, when the extraction was at once completed. There was a rather large quantity of urine in the bladder at the operation, which was performed under the influence of chloroform. For two or three days afterwards, though some urine dribbled away, there was capability of retaining a portion of it, and the parts being kept anointed with a mild ointment, and cold applications employed, no pain or inconvenience was complained of.

The calculus is nearly circular, and a little more than half an inch in diameter; it is flattened on two opposite surfaces; the color is whitish, the texture coarse, and the surface finely granular; weight, 25 gr. It was seen to consist of a nucleus, about the size of the head of a blanket-pin, and of a perfectly white color, surrounded by pale-brown laminæ, apparently indurated; these two portions were encased in a pale-buff substance, arranged so as to produce a more or less radiated structure. Chemically, the calculus was composed of oxalate of lime, with minute traces of uric acid and organic matter, to which its color was doubtless due, the darker portions containing the most organic matter.

A good recovery has been made, with perfect power over the bladder in retaining the urine.

GREAT NORTHERN HOSPITAL.

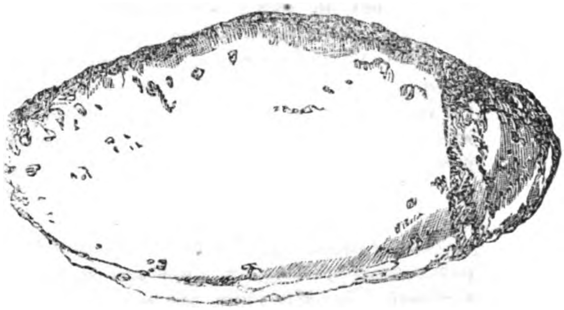
TWO CASES OF STONE IN THE BLADDER; LITHOTOMY, RECOVERY: THE SECOND CASE OPERATED UPON FOR THE THIRD TIME.

(Under the care of Mr. Price.)

We were lately present when Mr. Price operated upon two cases of stone in the bladder, and the following brief notice will show that connected with each are features of much interest.

In the first case—that of a boy aged about fifteen years—the vesical sufferings for many years had been extreme, but particularly during the last three, so that he was much debilitated and wasted at the time of his admittance into the hospital. On endeavoring to introduce a sound, a hitch occurred at the neck of the bladder; but on inserting the finger into the rectum, a large stone was detected lying in close apposition with the prostate. On pushing away the stone by a movement of the forefinger, the sound readily entered the bladder. The bladder was never empty of urine, nor could micturition be accomplished otherwise than by a constant dribbling.

On the 17th of December, the lateral operation was performed, and a pyriformed-moulded stone, weighing three ounces, and of the size and shape as *exactly* represented in the accompanying woodcut, extracted.



Although a very considerable-sized stone was known to be present, yet a very limited opening was made in the prostate, but which, nevertheless, was amply sufficient, due dilating force being used, to admit the outward passage of the calculus, which was fortunately caught by the forceps in its long diameter. The greatest amount of resistance was offered by the tissues external to the urethral canal, but these were further divided by the point of the bistoury. The stone was composed principally of phosphate of lime. That part which had pointed towards the prostate had, as will be noticed, taken the shape of the neck of the bladder, so that it is easy to conceive how the transit of urine in a full stream was always prevented. It is also interesting to remark that two uncles of the boy had both been operated on for vesical calculus, but he was not aware that any other members of his family were sufferers from urinary complaints.

In the second case, the patient was a man about sixty-five years of age, and had on two previous occasions been cut for stone by Mr. Price. After the man had left the hospital, about the end of last July, he remained free from the symptoms of stone although the urine continued highly phosphatic, ammoniacal and loaded with mucus. At the expiration of about two months, smarting pains, referred to the neck of the bladder and the urethral canal gave him great annoyance; and the urine still continuing in the same unhealthy condition, the bladder was daily washed out with water, and an anodyne solution containing nitric acid injected. The mineral acids with pareira, were also freely administered. Great care was taken with regard to his diet. Notwithstanding these precautions, his symptoms became more distressing, and when again admitted into the hospital, a small stone was readily detected lying close to the neck of the bladder. The only alternative was again to perform lithotomy. The bladder was in a far too unhealthy condition for lithotrity.

On the 12th March, when under the influence of chloroform, the lateral operation was performed. The line of incision was made exactly along the old double cicatrix, and a very limited division of the prostate effected. A small oval stone, an inch in length, and three-quarters in breadth, was readily removed. It was composed of phosphate of lime, and its rapid formation could easily be accounted for by noticing the large size of the crystals, and the way in which they were matted together by mucus. Mr. Price stated that he preferred entering the bladder through the structures which had been divided there before; for instead of the hazards of the operation being thereby increased, he believed them to be diminished. At the two former operations, seeing the tendency there existed to the formation of stone, he had requested one or more gentlemen who were present to examine the bladder before the patient was untied, so that no doubt could possibly be entertained of the existence of a second stone.

On the second day the greater portion of the urine passed by the proper canal, and has continued to do so since. This Mr. Price accounts for by the very limited opening he made in the prostate, and the smallness of the forceps he used for extracting the stone.

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LOCK HOSPITAL.

DIVISION OF STRICTURE OF THE URETHRA BY THE BOUTTONIERE OPERATION.

(Under the care of Mr. Henry Lee.)

The notes of the following case were furnished by Mr. Chisholm, house-surgeon to the hospital :—

Thomas T——, aged sixty, single, was admitted January 26th, 1860. He states that he had gonorrhœa twenty years ago. This was followed by stricture of the urethra and perineal abscess, which was opened with a lancet. The opening healed about eighteen months after. He continued to enjoy very good health, and was able to pass a small stream of urine without much difficulty till about six years ago, when, after some exposure to cold, he experienced a tingling and pricking sensation in the urethra, especially in the perinæum, and the flow of urine became impeded, till by-and-by he could not pass it without a good deal of straining. This state of things lasted about six months, when one day, while straining, he felt something give way in the perinæum, and a considerable quantity of urine escaped through the opening that had been made in this region. He got well under the treatment at St. Bartholomew's Hospital, with the exception of the free passage of urine per vias naturales, which was, however, rendered free by the occasional introduction of a catheter. He continued under treatment two months. Three years and a half ago he was unable to void his urine. An instrument was then introduced into his bladder, and passed occasionally for six months, when he could micturate in a very good stream. The stricture gradually returned, and twelve months ago he was as bad as ever. Every time he passed urine a small swelling appeared in the perinæum, which slowly increased until it burst, when he had extravasation of urine, and became an in-patient at St. Bartholomew's Hospital. While he was there an endeavor was made to pass an instrument, but without success. He has never since been able to void his urine in a stream, nor has an instrument of any kind been introduced into the bladder.

When admitted, there were to be seen two or three fistulous openings about the perinæum, and an oblong, greatly indurated lump just posterior to the scrotum.

Several ineffectual attempts to pass an instrument with and without chloroform having been made, the patient was placed in the position for lithotomy. A grooved staff having been introduced, the forefinger of the left hand was passed into the rectum, and the exact situation of the prostate gland and urethra ascertained. With the finger retained in the rectum to indicate the exact median line, a scalpel, with its edge directed forwards, was passed into the central line of the perinæum to the depth that was considered necessary to reach the ascertained line of the urethra. An incision was then made forwards to near the point of the grooved staff. The urethra was now opened into the groove of the staff, and the thickened structure which prevented the further progress of the instrument was divided. A large gum elastic catheter was now introduced through the urethra, and, guided by the forefinger of the left hand introduced into the wound, was readily passed into the bladder, and the urine drawn off. The instrument was tied in, and the patient put to bed.

Mr. Henry Lee remarked that he had in several instances operated in this way for stricture at this hospital, and elsewhere; sometimes when an instrument could be got into the bladder, and sometimes when it could not. In these operations no unfavorable symptoms had hitherto shown themselves. This success was attributable, probably, to the mode of performing the operation. In all cases Mr. Lee had been careful to avoid dividing or injuring the deep fascia; the incision was made into the urethra with the edge of the knife directed forwards, and the urethra was divided from behind forwards. In the present instance, as no instrument could be introduced into the bladder, there was no guide for the section of the urethra behind the seat of stricture; the finger introduced into the rectum was therefore made use of to indicate the exact situation of the urethra, and, guided by the information thus obtained, there was no difficulty in passing a knife into the urethra behind the stricture. The urethra then being opened upon the extremity of a grooved staff as far as that could pass, the two openings were connected and the intervening stricture divided. In other cases in which a similar operation had been performed no constitutional symptoms followed, and there was no reason to suppose that any such would follow in this case. It was important to avoid dividing the deep perineal fascia, not only on account of the danger that such a proceeding involved after the operation, but because in so doing one of the guides would be lost, which was of great value during the time of the performance of the operation. After the strictured portion of the urethra had been divided, it was not always easy to pass an instrument into the bladder;

but when the deep fascia had been left uninjured, the finger introduced into the wound would readily detect the point at which the urethra passes. Even although the passage should be temporarily closed, the position of the urethra would be marked by a circular yielding spot; and the end of the gum-elastic catheter, guided by the finger and pressed steadily upon this point, would be tolerably sure to find its way without difficulty into the bladder. But if the deep fascia be once divided, the guidance which in its natural condition it affords to the exact position of the urethra is lost.

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ST. GEORGE'S HOSPITAL.

TWO CASES OF ŒDEMA OF THE GLOTTIS; TRACHEOTOMY; FATAL RESULT IN EACH CASE.

(Under the care of Dr. Pitman and Dr. Page.)

When dropsy of the glottis occurs as an idiopathic affection, the danger to life is often in the highest degree imminent; for if this form of inflammatory disease is not at once recognised, the patient may be destroyed in a few hours. In many laryngeal affections that terminate fatally, the aperture of the glottis is found to be nearly closed by œdematous infiltration of its lips, this condition being the final result, as it were, of the exploding violence of the disease.

Acute inflammation of the larynx is divisible into two forms; one, the acute catarrhal laryngitis, affecting chiefly the mucous membrane of the larynx; the other, œdema of the glottis, involving the submucous areolar tissue. This division is that of Cruveilhier, and is simple, clear, and readily understood; it has been adopted by Ryland, and more recently by Dr. Gibb, in his work on the Throat and Windpipe. The term "acute catarrhal laryngitis" serves to distinguish the first form from any other disease of the larynx, and in it all the active symptoms of inflammation are present, accompanied by their usual and well-known phenomena. On the other hand, in œdema of the glottis they are absent. And, as every physician is aware, the line of treatment to be adopted must necessarily be exactly the reverse of that employed in the first or severely acute form of inflammation; for instead of using any depletory measures at the beginning, they must be of a supporting kind throughout.

The symptoms, then, of œdema of the glottis are different from those of acute inflammation. The great feature in the former is the extreme dyspnœa, which continues to increase, with a hissing inspiration, and all the appearances indicating impending strangulation. There is no difficulty in swallowing, as in acute laryngitis, unless the epiglottis is also involved, nor is there any external pain, but a feeling of constriction, with an increasing impediment to the act of inspiration. There is an absence of fever and other symptoms of laryngitis, and generally no inflammation of the fauces. The patient undergoes frequent spasmodic attacks of painfully suffocative breathing.

In the main, these were present in the two following cases, and we believe also in a third patient in the same hospital; but notwithstanding the treatment pursued, and the resort to tracheotomy, the vital powers were so prostrated that a fatal termination was the result in each case. After death nothing was found beyond œdema of the glottis and the parts around.

We would here draw attention to a mode of treatment worthy of more consideration than has been accorded to it—one that promises speedy relief, and for which the profession are indebted to Lisfranc. It consists in making small punctures in the œdematous parts, to let out the fluid. When the finger can be readily introduced into the mouth, the lips of the glottis can be felt as two tense, smooth, and rounded tumours, just behind the epiglottis; they cannot always, however, be reached. This plan of treatment was practised successfully by Mr. Busk, at the *Dreadnought* Hospital-ship, in instances of sailors thus affected. Great relief was experienced by numerous punctures with a sharp-pointed bistoury at the back of the tongue, the uvula, and the pharynx, repeated every two or three hours. The relief was found to be sudden and decisive, and much serum was got rid of, its expulsion being promoted by gargles of warm water. Here, then, was a cure effected without opening the windpipe.

It has been questioned by some pathologists whether the form of œdema of the glottis which we to-day illustrate by three examples is a real inflammation, from there being simply an effusion of serous fluid. It is probably a low inflammatory process, equally as active and rapid in its influence upon the nervous system as the acute form, and therefore of great importance to recognise early. In certain cases, when death is slow, pus or sero-purulent fluid is poured out in the submucous areolar tissue, and this latter can be sometimes drawn out in shreds. In other examples, where death has been speedy, serum alone has been found.

In the first of the following cases, death occurred in thirty-two hours, and in the second in seventeen hours from the commencement of the attack. For the notes of both cases we are indebted to Dr. Dickinson, Medical Registrar to the Hospital.

Austin G——, aged fifty-one, admitted Sept. 16th 1859, under the care of Dr. Pitman. Except an attack of syphilis some years ago, this man was said to have had good health until four o'clock in the morning of the day of admission, when he awoke with extreme difficulty of breathing. He was brought to the hospital at noon; he was then breathing with visible distress and muscular effort, and with a loud hissing sound. His face and lips were pallid, and he was covered with cold perspiration. The pulse was very small and rapid. An emetic was at once given, but no relief followed its action. Mr. Prescott Hewett, who was in the house, saw him immediately, and proceeded to cut down upon the cricoid cartilage, which was with great difficulty severed; apparently it had become ossified. The incision was extended downwards through a few of the upper rings of the trachea, and a free opening made. A tube was then introduced, through which he breathed freely. He appeared to be much relieved by the operation, and expressed himself to that effect. An hour afterwards, he was seen to be breathing well through the tube, and partially through the nostrils. He pointed to the upper partof the larynx as the seat of some uneasiness. The pulse was then 120, soft and full, but not quite regular. When seen by the physician, he was ordered to take, in the form of a pill, half a grain of opium and three grains of calomel every two hours; twelve ounces of wine were also allowed. - This he swallowed with difficulty, some of it being ejected through the tube whilst coughing. On the following morning he was asleep, breathing deeply and regularly through the opening. As he had a sleepless night, it was not thought right to disturb him. After this, he became more pallid, the finger-nails turned blue, and at noon he expired, without any apparent dyspnœa.

Examination twenty-one hours after death.—The body was in good condition. There was an incision in the middle line of the neck, which had divided the crico-thyroid membrane and cricoid cartilage. The breadth of the neck at the upper part was considerably increased. The muscles were brawny and infiltrated with lymph, and the glands were somewhat enlarged. On examining the pharynx, the velum palati was found to be thickened from effusion. All the parts were much thickened in a similar manner down to the upper margins of the glottis. This thickening was more especially marked in the right aryteno-epiglottidean fold. The glottis itself was also somewhat thickened, but no œdema existed below the true vocal cord, nor was there any distinct evidence of inflammation, or even congestion. The cartilages of the larynx were ossified. There were old pleural adhesions in both sides of the chest. The lungs and heart were healthy. The left kidney contained a large mass of strumous deposit. The ureter and pelvis of the kidney on the right side were much dilated. The cause of this was at first obscure, but afterwards, on minute inspection of the mucous membrane of the bladder, a small mucous polypus was found close to the orifice of the right ureter, which in some positions exactly closed it, and had, no doubt, obstructed the flow of urine down it.

Peter C——, aged twenty-five, admitted on Nov. 26th, 1859, under the care of Dr. Page. He worked at a baker's. On the evening before admission he said he had gone to bed perfectly well; he awoke about one o'clock in the morning with pain in his throat. At three he arose, as was his custom and worked till six. At that time he was suffering greatly from dyspnœa. This continued until half-past nine, when he was brought to the hospital. He was blue, struggling for breath and apparently at the point of death. Mr. Hammerton at once gave an emetic-dose of tartarized antimony, and bled him to the extent of eighteen ounces. The emetic acted well, and the bleeding very greatly relieved him. He then had two grains of calomel every four hours. When he was seen at noon, he was lying quietly, with a pale face, free from duskiness, and with ruddy lips. The breathing was free from distress—32 in the minute; the pulse 104; soft. He still complained of pains about the larynx. The voice was low, but not obviously unnatural in tone. The blood was neither cupped nor buffed. He was now seen by the physician, and laryngotomy was suggested; but, on consultation, it was considered that the case was not sufficiently urgent to warrant the operation. He was visited in the evening by the physician, who found him tranquil and easy, with no sign of venous blood in the color of the face or lips, a good pulse, and apparently in a promising state. He had a short time previously had a short spasmodic attack of dyspnœa. About ten minutes after this, just after having expressed himself better, and got out of bed without help, he was suddenly seized with extreme shortness of breath, turning blue, and struggling for air. The house-surgeon was in the hospital at the time, and the trachea was opened as soon as possible, and before the pulse ceased; but he never breathed afterwards.

Examination twenty hours after death.—The body was in good condition. There was the mark of venesection on the right arm, and the blood being very fluid a large quantity had run out of the wound (which was quite recent) after death. The fauces and pharynx were quite healthy. There was very great œdema of the aryteno-epiglottidean folds, and of the whole cellular tissue, as low down as the true vocal cords. The edges of the ventricle of the larynx were brought into close apposition by the swelling, and mucous fluid, of a milky appearance, exuded from the sacculus on pressure. Below the true vocal cords there was no effusion whatever; but the mucous membrane was somewhat reddened. There was an incision into the upper part of the trachea, just above the right lobe of the thyroid body, which would easily admit the passage of the index-finger. There were pleural adhesions of the right side of the chest. All the viscera were healthy.

ST. BARTHOLOMEW'S HOSPITAL.

ŒDEMA OF THE GLOTTIS, SUDDENLY SUPERVENING IN THE HOSPITAL, IN A CASE OF JAUNDICE FROM OBSTRUCTION IN THE HEPATIC DUCT.

(Under the care of Dr. Farre.)

In addition to the two cases of dropsy of the glottis which we noticed in St. George's Hospital, the preparations of which we also had the opportunity of examining in the museum, through the kindness of Mr. T. Holmes, the curator, another striking example came under our observation at St. Bartholomew's, of which the following is a very brief outline:—

Thomas C——, aged forty, was admitted October 1st, 1859, with icterus of five weeks' standing. He had all the usual symptoms consequent upon this: clay-colored stools; sickness; skin of a universal deep-yellow tinge, which extended to the conjunctivæ. He was submitted to mercurial and other treatment with but partial benefit, after which ox-gall was given with decided advantage for a time, and then discontinued. The mercurial treatment was abandoned on account of the debility which it produced. On the 28th of November he was ordered gentle applications of electro-galvanism transmitted through the liver, with good results; and the skin did not seem so dark in color. His improvement, however, was but slight. An examination of the liver did not disclose any enlargement, nor were there any symptoms of gall-stones, nor, in fact, any positive indication of the precise seat of biliary obstruction.

Early in December, whilst sitting up in the ward, he was suddenly seized with extreme dyspnœa and hissing inspiration, and the symptoms were so urgent that tracheotomy was performed; but death ensued within a few hours after the commencement of the attack, which a post-mortem examination revealed to have depended upon œdema of the glottis. The jaundice was at the same time found to have originated in obstruction of the hepatic duct from extension of inflammation to the substance of the liver in its neighborhood; and although the hepatic ducts were dilated, no bile was found in them.

GUY'S HOSPITAL.

EMBOLON IN THE LEFT CAROTID AND CEREBRAL ARTERIES, AND ALSO IN THOSE OF THE SPLEEN AND KIDNEYS; FATAL RESULTS.

(Under the care of Drs. ADDISON and REES.)

A FEW years back Virchow described a disease of the circulation under the name of *emboli*, signifying the detachment of some of the particles of fibrinous concretions or solid bodies formed in the heart or great vessels, whence they are carried along with the current of the blood, and finally obstruct some of the smaller or secondary branches of the vascular system. Such obstruction would naturally give rise to a certain set of symptoms according to the situation in which it might occur. The conditions producing it, however, are referable to gangrenous inflammation of the veins, organic affections of the left side of the heart, and atheromatous degeneration of the large arterial trunks. There are, probably, some other causes; but of the three mentioned, the second would seem to be the most common, and is observed chiefly in connexion with the cardiac mischief arising from rheumatism. The third, perhaps, ranks next in frequency.

Curiously enough, the three cases of the disease which we record were those in which rheumatism apparently played a prominent part; and, if our space permitted, we could have added a few cases wherein no symptoms of embolon were present, but serving simply as illustrations of the class of cases most likely to give rise to the disease.

It is on the borders of the mitral valve that these fibrinous concretions chiefly grow; and as their adhesion is oftentimes of the slightest possible character, the activity of the circulation alone proves sufficient for their detachment and carriage along the current of the blood, until the calibre of the vessel becomes too small to permit of their passing any further.

The fact has also been pointed out, that if the patient does not succumb from the first attack, he is liable to do so from the second or third; but occasionally they may be multiplied. If it be admitted that Dr. Parkes's patient is an example of the disease in question, it might be said there were frequent recurrences of the symptoms; but the patient ultimately recovered. Dr. Farre's patient is slowly improving, and the state of the patient's heart leaves no doubt of the correctness of the diagnosis.

It is impossible to say that any one set of arteries more than another is liable to be plugged up, as it manifestly depends upon the course which the floating body may take. The carotid and cerebral are, perhaps, the most frequently found in that condition; then come those of the extremities; and finally, those of the kidney and spleen. Some of these are clearly verified in the annexed case.

It is a noteworthy fact, that if the collateral circulation becomes established, the general disturbance is but temporary. It is otherwise when it fails, for then we encounter one of the forms of gangrene, dry or moist, partial or general, according to the trunk involved. These points are well understood in diseases of the bloodvessels, but they have hitherto not been given sufficient prominence. Pott's gangrene, described so many years back, is clearly due to total arrest of the circulation in minute arterial twigs, the result of atheromatous or, more likely, calcareous degeneration in their coats in the aged.

The following case (for the notes of which we are indebted to Mr. John Henry Gatton, clinical clerk) will be found one of extreme interest, and an excellent example of the disease under consideration:—

Jane P——, aged fourteen, was admitted Nov. 2nd, 1859, into Lydia ward, under the care of Dr. Addison. She was a pale, strumous-looking girl, with widely-dilated pupils. Menstruation had not commenced, and there was no mammary development. Her mother stated that, though delicate, she had never had any illness till eight weeks before admission, when her joints became painful and swollen, the smaller joints being affected as well as the knees, ankles, &c. A week before she entered she became worse and began to lose flesh. On admission, her knees and ankles were affected, and a large systolic bruit was audible over the mitral valve, with abnormal roughness over the aortic valves. Præcordial dulness was slightly increased; respiratory sounds normal. No history of previous rheumatism. The symptoms were attributed by Dr. Addison to sub-acute rheumatism. Ordered three grains of iodide of potassium and twenty minims of tincture of hyoscyamus, in peppermint julep, three times a day. A blister over the sternum.

Nov. 4th ordered four grains of calomel at once, and a senna draught with twenty minims of wine of colchicum five hours afterwards.

11th.—Some improvement; pains less. Ordered two grains of iodide of potassium three times a day.

On the 19th, the case came under the care of Dr. Rees. Return of pain from cold. To have five grains of Dover's pill every night, and decoction of cinchona with soda twice a day.

21st.—Right knee contracted and painful. To be rubbed with mercurial ointment.

30th.—Knee better, but the patient complains of general pains. Pulse quick; skin hot.

Dec. 4th.—She is very ill; unable or unwilling to speak or protrude the tongue; pain in the knees and ankles; memory slightly affected. Ordered one grain of opium every eight hours, and six ounces of brandy.

5th.—Pains and taciturnity continued; pupils natural; perspiration profuse; tongue white, thickly furred; urine found to be albuminous. Ordered three grains of calomel and one of opium at bedtime.

6th—In great pain if moved; has complete loss of motion of right arm and leg; no anæsthesia; feet peculiarly inverted; facial paralysis on the right side also noticed.

8th.—She is more cheerful, and the pulse stronger.

9th.—Action of facial muscles continues stronger on the left than on the right side; no double vision; right pupil slightly more dilated; can flex the right forearm after it has been extended, and move her fingers; can also move the right leg; tongue clean, protrudes towards the right side of the median line; pulse 116. (Dr. Rees diagnosed the occurrence of "embolon" in one of the cerebral arteries, and also—from the "bloody urine"—in the kidney.)

14th.—Bowels confined. Ordered suitable aperient medicine, and a blister to the nape of the neck. Urine still bloody; specific gravity 1015.

18th.—Much improved; paralysis gradually diminishing. Ordered a mutton chop.

She then continued improving till the 27th, when vomiting occurred, and she became rapidly worse, losing her speech, and at times her consciousness; paralysis also returning. On the 2nd of January diarrhœa had supervened, and she was ordered by Dr. Barlow an enema of starch and opium, and half an ounce of a mixture, twice a day, containing half a grain of strychnine to eight ounces of water. She continued gradually sinking, incapable of motion, and losing all consciousness, till the 9th of January, when she died at four o'clock A. M.

Post-mortem examination. Body extremely emaciated and ill-developed. On examining the brain, the left carotid artery at its base was completely obstructed by a fibrinous plug, which extended a short distance into the middle cerebral artery. The left corpus striatum and thalamus opticus were soft, and, on microscopical examination by Dr. Wilks, presented numerous granular masses. Pericardium healthy. Mitral valve covered with a thick mass of vegetations, to which coagula were adherent. Spleen large, congested at one end, and firm, the section showing a mass of minute extravasation. The kidneys contained several fibrinous masses in various stages; their structure full of minute extravasations.

UNIVERSITY COLLEGE HOSPITAL.

EMBOLON IN THE CEREBRAL ARTERIES, PRODUCING HEMIPLEGIA, IN A CASE OF DISEASE OF THE HEART FROM RHEUMATISM; RECOVERY.

(Under the care of Dr. PARKES.)

THE symptoms of impaired nervous power in the following case are very different from those which are usually encountered in paralysis depending upon sanguineous effusions or softening of the brain; for the attack occurred suddenly, whilst the patient was in the hospital, and every vestige of the palsy had disappeared on the fourth day, leaving behind morbidly-acute sensation in the right ear. Now, in cases of even very slight congestion of the brain, a patient may not lose consciousness, and may have a temporary paralysis; it is seldom that the symptoms so totally disappear in the short time mentioned in the present instance. For a week he now had slight recurring attacks of paralysis every morning on the left side of the body: it then became persistent, and he finally left the hospital improved. The case was suspected to be one of embolon; and although the symptoms are not very clear, we include it in the same category with the others.

The following notes are a brief abstract from the hospital books furnished us by Mr. W. Murray, the physician's assistant:—

Charles S——, aged thirty-six; has been subject to attacks of rheumatism, and has during the paroxysms, had cardiac affections. About May 1st, 1858, he began to feel weak and languid, and suffered frequently from præcordial pain. On June 1st, 1859, he was admitted into the hospital, in rather a weak state, with considerable pain at the epigastrium and uneasiness after eating. The chest is barrel shaped, with slight bulging in the cardiac region; the lungs are healthy; the heart's area of dulness is too large; a murmur with first sound is heard at the base, of greatest intensity over the second right costal cartilage; another murmur with first sound is heard loudest at the apex; (aortic obstruction and mitral regurgitation diagnosed;) no diastolic murmurs.

June 3rd, 1859.—Eight A.M.: He was seized with pain in the head, loss of power in the limbs, and loss of speech. When the physician's assistant saw him, he was lying on his right side, with the legs drawn up; speech very difficult; countenance very anxious, and bathed in a cold perspiration. The mouth was drawn to the left side; right eyelids partially paralysed; pupils contracted equally; sees best with the right eye, and hears best with the right ear; dysphagia; fluid returning through the nares; total loss of sensation and motion of the right arm; no rigidity; the left arm unaffected; loss of sensation, &c., of the right side of the chest; the lower extremities unaffected; the urine passed freely; healthy. He was ordered calomel with croton oil.

6th.—Every symptom of paralysis has disappeared: in fact, the right ear is too sensitive.

14th.—Has had each morning an attack of paralysis on the right side.

18th.—The right side quite perfect; the left arm has become slightly paralysed; and the left ear has become affected.

From this time he improved, and left the hospital in July, with his urine slightly albuminous.

ST. BARTHOLOMEW'S HOSPITAL.

EMBOLON IN THE CEREBRAL ARTERIES, FOLLOWED BY HEMIPLEGIA; EXTENSIVE MITRAL VALVULAR DISEASE FROM RHEUMATISM. IMPROVEMENT.

(Under the care of Dr. FARRE.)

WHEN the infarctus occurs in the brain, it is said to usually occasion yellow softening; but the rapidity of the functional disturbance, as in the following case, simulates an attack of apoplexy. Here, however, although the symptoms, perhaps, do not differ from a case of cerebral hæmorrhage or acute softening, the attack was followed by hemiplegia without loss of intelligence or of speech, and slow improvement is going on. From the state of the mitral valve, it is probable there will be a recurrence of the mischief at a later period. A case has been recorded by Schutzenberger, in which numerous slightly attached irregular vegetations were present on the mitral valve, and many were also found loose in the cavity of the ventricle.

Henry S——, a butcher's boy, aged sixteen, a delicate looking and spare lad, was admitted on the 20th of March, 1860. It appears that two years ago he had an attack of acute rheumatism, for which he was confined to bed for some weeks; all the joints of his body were affected, but he made no complaint of pain or uneasiness over the region of the heart. He is blind of the right eye from an injury received during childhood. At seven o'clock on the morning of admission, he was carrying home to his master some meat from market, when he suddenly staggered, and was obliged to catch hold of the railings for support. He became utterly helpless, was then conveyed to the hospital, and placed under Dr. Farre's care. On his admission, it was discovered that he had hemiplegia of the left side, with some rigidity of the leg, but not of the arm: there was no loss of intelligence nor of speech. The carotids were acting most powerfully, with great pulsation in the neck. On examing the heart, the organ was found to be hypertrophied, with a direct systolic murmur, and a double murmur was heard with both sounds over the aorta. There was, besides these symptoms, a good deal of pain in the head. He was once blistered at the nape of the neck, six leeches were applied behind the ear, and three grains of calomel were ordered at night.

March 22nd.—The pain in the head has gone, although the pulsations in the carotid arteries are still strong. He was ordered half an ounce of the infusion of digitalis three times a day. This not only diminished the excessive action of the heart, but next day permitted of some movement of the affected leg, and on the 26th the rigidity had completely disappeared. The infusion of digitalis was now reduced to two drachms, with twenty minims of tincture of hyoscyamus three times a day. The patient now began to improve, and on the 2nd of April he took the compound cinchona mixture, with two grains of iodide of potassium, three times a day.

April 6th.—When standing up he can move the affected leg.

9th.—Great pulsation in the vessels generally, but particularly in those of the arm, which beat with a thrilling sensation. The digital arteries beat as strongly as an ordinary radial artery at the wrist.

Besides his other treatment, he is having electricity applied every second day with considerable benefit.

16th.—Slowly improving. Ordered a mixture containing quinine three times a day.

23rd.—Can walk a little without assistance, and is otherwise much improved in his general health. He can move both his leg and arm very much better; the leg can be drawn up in bed, but he cannot grasp with the affected arm. There is still a double friction sound, and a double valvular murmur. The pulse is that clearly indicating regurgitant mitral valvular disease. His intelligence is perfect. The galvanism is applied three times a week, and the quinine mixfure is continued.

May 7th.—Heart symptoms as before; is sitting up, and walks with considerable dragging of the affected leg; his strength is much increased. Treatment continued, with wine.

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KING'S COLLEGE HOSPITAL.

WARTY GROWTHS IN THE LARYNX, THREATENING SUFFOCATION IN A PREGNANT WOMAN; TRACHEOTOMY; DEATH IN FOURTEEN HOURS; INEFFECTUAL LABOUR IN THE INTERVAL; POST-MORTEM CÆSARIOTOMY.

(Under the care of Dr. Budd.)

Of the many remarkable and rare cases which have appeared in the "Mirror" for many years past, but one only has presented peculiarities in any way similar to the case recorded below. The patient whose case is here detailed (through the kindness of Dr. E. S. Thompson, house-physician to the hospital) was a woman at the full term of pregnancy, who had been subject to warty growths in the larynx for some months, but which were not detected during life. After being in the hospital for a few days, the dyspnœa was so urgent that tracheotomy was performed by Mr. Mason, the house-surgeon, with relief for the moment. The pains of labour set in, and every effort was made to effect a speedy delivery, but in vain, and she died fourteen hours after the windpipe had been opened. Cæsariotomy was now resorted to by Dr. Sansom, the physician-accoucheur's assistant, and the child removed from its matrix, but all efforts at resuscitation were unavailing. Thus both mother and child were lost. The pregnancy was a painful coincidence, as in Mr. Pollock's case; but its end was not so fortunate. We record the case in our series of laryngeal affections, as it happens to be one of a rare kind, depending upon growths from the mucous membrane of the interior of the larynx. Our space on the present occasion prevents our going more into the subject than to observe that it is possible that a diagnosis of their presence might have been made at a period when the symptoms were not so urgent, and when an operation would have held out better prospects of success.

A florid-looking woman, thirty years of age, married, and nine months pregnant, was admitted into the above hospital, under the care of Dr Budd, on the 10th of March, 1860. She stated that she had always been healthy, had had four children and two miscarriages, and had been subject to occasional sore-throat. She first observed an alteration in her voice in July, 1859; and on admission she could not speak above a whisper. Her breathing was attended with a loud stridulous noise. There was an occasional feeling of suffocation, but no difficulty in swallowing. She had a slight cough, with mucopurulent expectoration, which microscopical examination proved to contain lung tissue. Her face was dusky, lips blue respiration hurried, and the breathing over both lungs feeble. There was some dulness at the apices, with harsh breathing and gurgling crepitus. There was no tenderness over the larynx externally. On introducing the finger into the fauces, the epiglottis felt somewhat thickened, and the vocal cords tumid and cushiony.

A solution of nitrate of silver, half a drachm to an ounce of water, was freely applied to the vocal cords, and iodide of potassium prescribed, with some temporary relief. On the evening of the 16th of March however, the breathing became much more difficult. Various antispasmodics and counter-irritants were tried, and local depletion, but without success; and toward morning the lividity of countenance and dyspnoea became so great that a fatal termination was anticipated; she grew rapidly unconscious, and it was evident that she could not live many minutes.

Tracheotomy was performed without difficulty by Mr Mason, the house-surgeon, who having exposed the windpipe, drew it forwards by means of two hooks inserted on either side, opened the trachea, and introduced the ordinary tube. No pain was experienced during the operation. The patient was a good deal relieved, and recovered her consciousness; the breathing, however, continued much embarrassed, the bronchi being obstructed by frothy mucus, and the face and integuments of the chest emphysematous. Stimulants were freely administered, but she got weaker, and sank fourteen hours after the operation.

Labour having set in some few hours before death it was thought expedient to make some attempts to save the child. Turning was tried, but found impracticable. Immediately after death, the Cæsarean section was performed by Dr Sansom (the physician-accoucheur's assistant), but the child gave no sign of life, and all attempts at resuscitation were fruitless.

At the post-mortem examination, a vascular warty growth was found occupying the interval between the true and false vocal cords on the right side, obliterating the ventricle of the larynx, and projecting across into the opposite ventricle so as almost completely to obstruct the passage. The posterior surface of the epiglottis was rough and thickened, and the mucous membrane at the upper part of the trachea was thick and corrugated. The apices of both lungs were riddled with small cavities.

Clinical Records.

SERIES OF OPERATIONS AT KING'S COLLEGE HOSPITAL.

On the 21st ult, the following operations were performed by Mr. Fergusson, at King's College Hospital; and we learn that all of the patients are now doing well :—

1. A fistulous opening in the perinæum communicating with the urethra was closed, by paring the edges and bringing them together with silver sutures, incisions being made on either side to relieve traction. The patient was a young man, with stricture of the urethra, following upon a severe injury to the perinæum—a variety of stricture extremely difficult to cure. He had been already submitted to frequent operations.

2. Caries of the frontal bone over the frontal sinuses was present in a man, about thirty-five years of age. His history showed the disease to be syphilitic, there being loss of integument immediately over the affected part, producing great deformity. The subcutaneous attachments were freely divided, and the edges of the skin drawn towards the centre of the exposed space, and kept there by means of silver sutures. Lint compresses were then applied, and a light bandage over all.

3. This was a case of stone, in a man seventy-six years of age, who was submitted to the usual lateral operation of lithotomy, and a circular calculus, a little larger than a shilling, was extracted, having the peculiarity of being almost perfectly flat, its greatest thickness scarcely exceeding a line and a half. The operation occupied a little over a minute. A calculus of the form of that removed in the present instance is extremely rare. We recollect, however, seeing one extracted of an oval shape very much larger, but almost equally as flat. The middle lobe of the prostate was enlarged in this patient.

4. An old man, who had already undergone a previous operation for the removal of epithelial cancer, at the base of his left thumb, was now brought into the theatre to have a recurrence of the disease treated. It now seemed to involve the head of the metacarpal bone of the thumb, together with the structures between it and the forefinger. The entire thumb and metacarpal bone were detached, but in the progress of the operation it was discovered that the disease was more extensive than was at first imagined. Mr. Fergusson, therefore, took away the forefinger also, with its metacarpal bone, and carefully dissected out all the affected soft structures. The flaps of integument were then brought together by means of wire sutures, as in the other cases.

5. This was a case of disease of all the articulating surfaces entering into the formation of the right wrist-joint, with the formation of abscesses and sinuses. Some of the latter were run together, and portions of dead bone extracted. These included some of the metacarpal bones, and a part of the lower end of the ulna. Bad as the case appeared to be, it was hoped that as all the affected parts were removed, a healthy action might ensue, and the wrist yet be saved. The case, in most respects, strongly resembled some in which we have seen this important articulation excised. The patient was a man of about thirty, the subject of disease for some years.

6 and 7. These were cases of necrosis of the tibia, and harelip. The first was treated by the removal of the dead parts of the bone, and the latter by the usual operation for that deformity.

URINARY CALCULUS OF UNUSUAL CONFORMATION.

The general precepts of surgery undergo daily modification in the endeavors to apply them to the ever-varying exigencies of practice. We saw lately a patient, under the care of Mr. Coulson, at St. Mary's Hospital, whose case presented all those features which are supposed to favor the cure of calculus in the bladder by lithotrity. He was a healthy man, of sound constitution, the middle age (forty), having a healthy bladder, with fair containing power, no enlargement of the prostate, and a urethra which, although it had been the subject of stricture, was fully dilated. These indications for lithotrity Mr. Coulson considered to be more than counterbalanced by a peculiarity in the case, which had not before been accounted as amongst the reasons for preferring lithotomy to lithotrity in certain instances, probably on account of the rarity of its occurrence. The stone could be detected with great facility—in fact, the sound struck against it immediately on entering the bladder, but it could not be dislodged from its position. It appeared to be impacted at the neck of the bladder, and in this position Mr. Coulson considered that manipulations necessary for crushing the calculus could be safely performed. He therefore had recourse to lithotomy by the lateral operation. A large stone was removed rapidly, and with very little hæmorrhage; it was found to be fixed at the neck of the bladder, and displayed an unusual conformation. It was flattened and irregularly rhomboid in general shape, but possessed an anterior prolongation towards the centre, which passed forward to the urethra, while at its posterior edge were seen two processes, corresponding in position with the ureters. Thus it would seem that the stone, descending from the kidney, had been lodged at the mouth of the urethra, and remained fixed there; had increased in size by accretion, and moulded itself to the surrounding parts ; had extended forward into the urethra, and backwards into the apertures of the ureters. The peculiar shape and position of the stone explained some of the symptoms. From its fixity there had been no increase of pain attendant on riding or active exercise. There had been no considerable irritation and no hæmaturia ; but frequently the urine ceased to flow during micturition, and it always passed slowly and in an imperfect stream. The operation of lithotomy was followed by an unusually successful recovery. Urine passed by the urethra on the following day. The wound healed rapidly, and within fourteen days the man walked out of the hospital cured.

ANTERIOR HALF OF THE TONGUE NEARLY BITTEN OFF.

A CASE of somewhat unusual injury to the tongue was admitted into the Royal Free Hospital on the 3rd of March. The subject of it, a young man twenty years of age, was standing with his tongue out of his mouth near the end of a cart, when the vehicle, suddenly tilting, came in such violent contact with his chin as to cause the teeth to close upon the tongue, whereby the whole anterior half of it was nearly bitten off. When brought into the hospital, the bitten part was hanging, as it were, by a mere shred; and, hopeless as it seemed, an effort was made by Mr. Gant to save it. After arresting the hæmorrhage, which had been most profuse and very difficult to stop, three interrupted sutures were applied above and three below, the separated parts of the organ being adjusted as neatly as possible. Some little inflammation and swelling followed, as was anticipated ; but when we were first shown the case on the 5th, union by the first intention seemed to be pretty general. Subsequently, a firm connexion appeared to be established, and the man was discharged well ; but there was not the same perfect sensation on the right as on the left side of the organ. It was on the latter that complete separation had not ensued at the time of the accident. This case is a practical illustration of how much may be done to save parts in very bad and apparently almost hopeless cases.

BICARBONATE AND NITRATE OF POTASS IN RHEUMATISM.

THE good effects of the bicarbonate of potass in rheumatism have been proved to be of the most valuable character, and it is now constantly prescribed. The benefit is more apparent when the symptoms are acute, but is also observable in chronic instances of the complaint. In some of the latter, however, it is not well marked, and some other remedy must be relied upon, such as another salt of the potass, the nitrate for example, long celebrated for its curative powers in rheumatism. We examined a female, forty-one years of age, on the 8th ultimo, who had been admitted into University College Hospital, under Dr. Parkes's care, some three weeks previously, with a rather sharp attack of subacute rheumatism, affecting the joints of the body generally. For this she was carried into the ward and placed in bed. This was her seventh attack, and the disease had to some extent become chronic. There was a strong mitral regurgitant murmur, but no other indication of cardiac mischief. She was treated by the bicarbonate of potass for some days with benefit. This was then discontinued, and recourse was had to the nitrate of potass, with the effect of removing the general severity of the symptoms, and at the present time she is much improved in every way. Dr. Parkes observed that the bicarbonate was not, perhaps, so useful in the subacute or chronic forms of rheumatism as in the decidely acute examples of the disease. It is quite probable that this patient may have been previously treated by this salt of potass, with good results, in some of her previous attacks, and this might account for its proving now of but partial benefit.

GOOD EFFECTS OF BLISTERS IN WRIST-DROP FROM SATURINE DISEASE.

WE have frequently observed, at St. Bartholomew's Hospital, in patients under the care of Dr. Farre, the good effects, in chronic rheumatism, of blistering the joints, combined with other and constitutional treatment. In most of these cases the relie to the pain is very great, but it is necessary to repeat the blistering to render its results the more permanent. We might cite several examples in illustration ; but our desire is to draw attention to the same plan of treatment in wrist-drop from lead poisoning, especially as its immediate benefits are very decided. A man was admitted into the hospital with complete loss of power in the extensors of both hands from the causes mentioned. Dr. Farre ordered (besides internal treatment) a blister to be applied to the back of one hand and arm, and iodine ointment to the other. The rising of the blister had the effect of immediately permitting the patient to use the fingers of that hand with considerable increase of power, whilst no effects were produced upon the hand which had the ointment applied to it. The latter was discontinued, and a blister substituted with an effect similar to that in the other hand. Notwithstanding this speedy result, however, Dr. Farre observes that sometimes the iodine is more successful than blisters. The value of blisters in such cases is undoubted.

MORTALITY AMONGST THE TROOPS AT HONG-KONG.—We extract the following from a letter in the *Bombay Times and Standard* of April 10th :—" At the present moment there are fourteen garrison guards, upon which seven sergeants, ten corporals, and ninety-six privates mount daily. In the hospital there are 124 men, not including the convalescents, who are stationed on board the *Hercules*. Although every military medical officer is well aware that neither European nor native can live below stairs, half the prisoners in the provost live, languish, and die in cells upon the ground floor. Thirteen men are now undergoing imprisonment, with or without hard labor. The whitewashed cells are large, and contain only an iron bedstead, while they are so far apart that that no prisoner can carry on a conversation with his next neighbor. Death stalks along so silently, and visits men so suddenly, in this region, that the cemetery in the Happy Valley is full of gaping graves."

Medical Societies.

MAY—JUNE.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

F. C. Skey, F.R.S., President.

MEMOIR ON INTRA-UTERINE FRACTURES.

BY BERNARD E. BRODHURST, F.R.C.S.,
Senior Assistant-Surgeon, Royal Orthopædic Hospital, etc.

The author commenced by referring to some points of distinction which have been observed in fractures *in utero*. He stated that fracture might be simple or compound—disunited or reunited at birth; or that solution of continuity might be owing to imperfect ossification and congenital rickets. Having alluded to these several varieties, he proceeded to remark especially on reunited fractures *in utero;* and he quoted cases from Plouequet, Kopp, Devergie, Carus, Schubert, Sachse, and Moffat; relating, also, the cases which had occurred in his own practice. The causes of intra-uterine fracture were lastly considered; and it was stated that neither *contre-coup* nor compression by the walls of the uterus could act so as to produce fracture, so long as the membranes—the chorion and amnion—remained entire; but there was reason to believe that intra-uterine fractures occurred as effects of physical injuries—that the origins of these fractures and of congenital distortions were similar, and that they were occasioned by abnormal muscular action. Two cases of congenital double club-hand and double club-foot were adduced as examples of the mode in which abnormal muscular action and distortion are induced in the fœtus; and, moreover, the author stated his belief that, in these cases, whether of fracture or distortion, the effect varies as the cause varies, and that temperament or other like condition may probably also modify the effect.

Dr. Little said the subject discussed was one of importance and difficulty. He was not satisfied with the explanation which Mr. Brodhurst had given of the mode in which these supposed fractures took place. The author had overlooked one point in attributing the fractures to mechanical violence. In all the cases he (Dr. Little) had seen there had been a deficiency of one or more of the toes, deficiency of the fingers, and, as far as could be ascertained, deficiency of the lower end of the fibula. The appearances were altogether such as indicated that a compound fracture of the bone at its lower third had existed from mechanical causes. The deformity attending such a case was present, and there was indentation of the skin at the part. Mechanical violence alone, however, did not seem sufficient to explain the deficiency of the fibula and the toes. He could well suppose that some cause which had produced considerable disturbance of the cerebro spinal system at some very early period of the utero-gestation might have given rise to the compound deformity. There was still, however, much obscurity attaching to the whole subject.

Mr. Pollock had lately seen an infant two days after birth, in whom there was fracture of both the tibiæ the broken ends of which formed an acute angle; but the skin was unbroken. There were only three toes on each foot, and three fingers only on the left hand. Between the fourth and fifth months of pregnancy the lady had fallen down. The child was born about three weeks before the full time. Admitting that the malformation of the tibia resulted from fracture dependant upon violence, it could not be conceded that the deficiency of the toes and fingers was due to that cause. Something more than mechanical violence was necessary to explain this kind of malformation—how far it was accidental, how far natural.

Mr. Fergusson suggested that, looking at the great number of accidents to which pregnant women were subject, and how rare these cases of malformation were, the occurrence of both fracture and deformity was simply a coincidence. He had seen many cases of deficiency of the toes and fingers, but in none of them had he noticed fracture of the long bones of the extremities.

Mr. Adams said that the fact that these malformed legs did not grow *pari passu* with the other parts of the body favored the views advanced by Dr. Little. In one case he had under his care for eight years, the tibia was still shortened five inches. He thought there must be some malformation co-existing with the supposed fracture. Six or eight of these cases had come under his care during the last ten years. There was no difficulty in dividing the tendons; and supposing the leg to be improved, the division of the tendons was beneficial.

Dr. Barclay requested more information on the subject from Mr. Brodhurst. He seemed to ignore the theory that these fractures were the result of mechanical violence, and thought they were produced by the muscular contractions of the fœtus. There was some difficulty to him (Dr. Barclay) in supposing the existence of such muscular contractions, and if they did exist, he had more difficulty in understanding how they could produce such a deformity as that which existed in Mr. Pollock's case, the fracture being about the middle of the bone. The hypothesis that there had been some original malformation, and that the fracture was a coincidence, seemed more natural than that those conditions should be regarded in the light of cause and effect.

Mr. Brodhurst admitted that the subject was a difficult one, and that perhaps a perfectly satisfactory answer as to the causes of intra uterine fracture could scarcely be obtained. He thought, however, that from analogy it might be concluded that these fractures were occasioned by muscular action. In the adult, even, a healthy bone might be fractured by muscular contraction alone; and he submitted that, considering the soft condition of the fœtal bones, the same might occur *in utero*. How else could fracture *in utero* be explained? He had cited one case where the bone protruded at birth, and where, notwithstanding, reunion had commenced. He had purposely alluded, in his communication to the Society, more especially to fractures of healthy bones; those to which reference had been made by Dr. Little and Mr. Adams were cases of rachitic origin. He had mentioned that in one of his cases the gastrocnemius muscle was so strongly retracted that it was impossible to straighten the tibia until the tendo-Achillis had been divided: this having been done, the deformity of the bone was easily removed. When a bone has been bent by muscular action, and still more so when it had been fractured, continued action of the muscles would increase deformity, as in Mr. Pollock's case. Doubtless, in these cases an irregular development of osseous structure was frequently found, the lower portion of the fibula, or of the ulna, as the case might be, being deficient; and when this occurred, muscular action might still more be supposed to be the cause of fracture than when the two bones existed in their entire length. Mr. Brodhurst therefore concluded that a sudden muscular action of the fœtus might produce fracture; or that from a similar cause, a bone might be bent; or, again, that, through continued spastic action, the limb might be distorted. No other action than that of the muscles could thus affect the fœtus *in utero* so long as the membranes remained entire. Montgomery's case was exceedingly interesting. It was probable that in this instance the membranes were returned by the fall, and that the fracture was due to *contre coup*, or perhaps to contraction of the uterus. It was well known that during parturition contraction of the uterus might fracture the cranial bones of the fœtus. Fractures of the long bones were also produced by clumsy manipulation in delivery. But so long as the membranes remained entire, fractures *in utero* could only be produced by sudden contraction of the muscles of the limb.

Dr. Little said he thought the discussion was in danger of confounding congenital curvatures of bones from rickets with the instances of supposed congenital fractures of the tibia and fibula, such as had been laid before the Society by the author. In the drawing exhibited, some of the figures admirably represented the class of cases supposed to proceed from intra-uterine fracture. He (Dr. Little) had himself elsewhere mentions a dozen instances of the kind It was difficult to say from what cause the deformity in question proceeded. Certainly it looked extremely like intra-uterine fracture. In the cases produced by the author, and in every instance he had seen, the form of the leg was similar to that of a badly-united compound fracture at the junction of the lower third of the leg bones, with an indentation of the skin, and an adhesion of it to the salient point of the tibia. In every instance, however, which he had seen, there existed also deficiency or absence of the lower end of the fibula, deficiency on the peroneal side of the member, of one or more toes in the affected limb, or limbs, when both were similarly affected; usually the foot was in the position of valgus, and sometimes the case was complicated with deformity of the hands. As to any opinion whether these supposed intra-uterine fractures resulted from the mother meeting with an accident and the fœtal limbs suffering directly from the violence of the jar to the mother's frame, or actual application of violence to the abdomen, or the fœtal limbs being broken from excessive action of the fœtal muscles themselves fracturing the bones, as is occasionally seen at later periods during independent life, he might remark, that the co-existence of deficiency of toes and the lower end of the fibula seems to point to something more than the effect of muscular action. Certainly a fall or a blow experienced by the mother within two or three months of labour could not account for these conditions. The difficulty in arriving at a true explanation lay in the present deficiency of anatomical and physiological knowledge as to the relative development of structure and functions of the muscles and bones at early stages of fœtal life. He could imagine that if muscular fibres, as stated by some authors who have studied embryonic development, were distinctly recognisable by the third month, the bones at that period, being filled by firm materials, it was possible that excessive muscular action of the fœtal limb might rupture or otherwise produce the distortion and deficiency of parts noticed in these cases. In reference to the attempts to be made to remedy the distortion, he could cite a case in which twenty years ago he divided the tendo-Achillis and a band of fibres occupying the place of the peronei tendons in both feet, and succeeded in restoring the position of the feet; but the peroneal bones were never developed, so that with increasing age and weight the distortion of the feet returned. The individual was now a stout, well-grown man, except in the lower extremities, and the case confirmed, in this respect, the observations of Mr. Adams, that it was a peculiarity of these cases that the limbs do not grow like ordinary limbs. In this adult the lower extremities were probably eight or ten inches shorter than they would have been if they had grown in proportion to the rest of the body. He had seen one of Mr. Brodhurst's cases, and could confirm what he had said as to having considerably straightened the bones of the leg in addition to removing the foot deformity.

CASE OF IMPERFORATE ARCH OF THE AORTA IN WHICH THE ROOT OF THE AORTA WAS RUPTURED.

BY T. A. BARKER, M. D.,

Physician to St. Thomas's Hospital.

A MAN, aged twenty-four, supposed to be in good health, was suddenly attacked, while lacing his boot, with severe pain in the chest, followed by great dyspnœa. He was supposed to have pericarditis. In about a fortnight he came to the hospital much easier, and was said to be convalescent. There was extended cardiac dulness; no heart sounds; and no impulse, except to the right of the sternum. He died suddenly the next day. The coats of the aorta were not diseased, but it was very greatly dilated from the aortic valves to an inch below the innominata. Just below the ductus arteriosus it was completely closed by congenital malformation. There were two recent lacerations of the aorta close to its origin, and through these blood had become infiltrated into the substance of the heart; this had excited pericarditis, as was shown by a thick layer of shaggy lymph; and death had ultimately been caused by rupture of the visceral pericardium, and the escape of a considerable quantity of blood into its sac. The subclavian and internal mammary arteries were much enlarged.

Dr. Stephens, of Manchester, had once met with a somewhat similar case to that related to the Society. It had every appearance of being congenital, inasmuch as there was no evidence of the existence of a previous inflammatory state. There was no tumour nor appearance of compression, but it seemed as though the aorta had been tied with a fine piece of whipcord just beyond the ductus arteriosus. The impression upon his mind was that some natural tendency had existed for constriction to have occurred at that particular part. On examination, the infra-scapular artery was found to be of an unusual size. The injection had not been so successful as he could have wished, but he thought there must be some obliteration of the aorta. The structure of that vessel was, however, complete and perfect, and the arch was only slightly dilated, the collateral circulation being carried on entirely by the supra-intercostal, the internal mammary, and the sub-scapular arteries. The internal mammary, he was going to say, seemed almost the size of the bronchial, but certainly the supra-intercostal was quite as large. The collateral circulation had evidently been carried on for many years, and the patient was in a perfect state of health. He was a working butcher, accustomed to carry heavy weights, and fell dead whilst carrying a basket of meat. On examination after death, a rupture of the aorta was detected within the pericardium. The heart itself was only slightly hypertrophied, but the aorta had given way in a singular manner. Probably a day or two before the fatal event, the internal and middle coats had become ruptured. The blood had insinuated itself between these coats and the external pericardial covering of the vessel, which was therefore considerably enlarged. In consequence of this weight, the pericardium had given way more than an inch distant from the rupture of the internal and middle coats, and the pericardium was distended with about a pound of blood. There was no valid reason to suppose that any previous disease had existed at the point of rupture.

Dr. Maclachlan would have been glad to have inquired of Dr. Barker, whom he regretted was not present, whether the case before them was not really one of dissecting aneurism of the aorta. The point at which lesion took place was exactly at the usual site; and it was well known that in these cases the vessel at the point of rupture was frequently perfectly sound. In a similar case which he had under his care some years since, the rupture was found to extend almost entirely round the vessel. Immediately above the valves there was a clean cut as if it had been made by a knife. In the case before the Society, the effused blood appeared to have been bound down in the ordinary manner by that portion of the pericardium which covered the aorta. When this gave way, pericarditis resulted. The case altogether appeared to be one of a common character.

Dr. Barclay begged to observe, that the author of the paper had stated that when he cut across the aorta he came to a part where there was only a very small hole, sufficient only to admit a probe, and he doubted whether there had not been at that point a complete obstruction of the vessel.

Mr. Skey remarked, that he had been desirous to call the attention of some of the speakers to the circumstance mentioned by Dr. Barclay. It was clear that some obstruction existed. A case of a similar character had occurred in his practice some years since. The patient was a stout, but very healthy, woman, about forty-five years of age, but whose death was not sudden. He scarcely adduced it as a case of rupture, and referred to it merely as evidence that rupture was not inevitable in such obstruction. The circulation was carried on in a very remarkable manner. The bronchial arteries were supplied by the inferior thyroid, and the obstruction was complete at the point of junction of the ductus arteriosus and the aorta. In this case there was, doubtless, some relation to original development; and there were, moreover, a number of peculiarities in it which formed a parallel with those mentioned by Dr. Stephens. The rupture was, in both cases, the result of obstruction, more or less complete, in the arch of the aorta.

A CASE OF FEMORAL HERNIA, WHICH HAD DESCENDED BENEATH THE PECTINEAL PORTION OF THE FASCIA LATA, AND WAS PARTIALLY COVERED BY THE PECTINEUS MUSCLE.

BY JOHN ADAMS, ESQ., F.R.C.S.
Surgeon to the London Hospital.

THE case was that of a female, aged forty-five, who was admitted into the London Hospital laboring under the usual symptoms of strangulated hernia. After the most careful inquiry into the history of the case, the conclusion arrived at was that, as no hernial swelling could be detected in the region of the crural opening, the case was one of femoral hernia, which had been reduced by the taxis, and in which the symptoms continued, probably from the effects of the stricture upon the intestine. There were two movable lymphatic glands perceptible in the crural region. The woman complained of dull pain in this region. Under this impression, a grain of opium was administered every four hours, and the sickness subsided. On the third day after the commencement of the opiate treatment, the symptoms reappeared with increased intensity. A further examination was made, but no hernial swelling was detected. An injection of warm water was ordered night and morning, and a grain of calomel, with half a grain of opium, were ordered every two hours; brandy and wine were also administered. On the fifth day after her admission, all her symptoms became exacerbated, and she was at once taken into the operating theatre for a more complete exploration of the femoral ring.

When placed on the operating table, with the thigh everted, a fulness rather than a swelling, was perceptible, apparently under the edge of the abductor longus. The skin and superficial fascia were divided over this swelling. and a little dissection exposed a dense, elastic fascia, slightly raised into a convex bulging. From its position and depth, the fascia was at once recognised as the pubic portion of the fascia lata; it was remarkably tense. Mr Adams carefully scratched it with the scalpel, and it was divided on a director. Some red fibres were clearly distinguishable overlapping the swelling under the fascia, which from their direction, were evidently part of the pectineus. It was necessary to cut these transversely inwards on a director. The hernial sac was now exposed, and its neck was traced to the femoral ring. A portion of omentum, much congested, was found in the sac, under which was some small intestine in a gangrenous condition; and there was some dark fœtid pus in the sac. The stricture was divided, and a portion of the omentum was removed. A quantity of feculent matter escaped on the division of the stricture. The wound was lightly dressed, and stimuli were administered. She died four days after the operation.—Autopsy: The hernia had descended through the femoral ring, but not in the femoral sheath. It reached at least four inches below Poupart's ligament, and was situated behind and internal to the femoral vein in the direction of the pectineus muscle. The muscle, deprived of its investment of fascia lata, was deeply excavated by the lodgment of the hernia; a few of the fibres of the muscle—namely, those arising from the spine of the pubis—projected in the form of a fleshy column, and had overlapped the hernia; the remainder of the muscle was atrophied and sloughy. The remains of the pectineal portion of the fascia lata, which was somewhat sloughy, still covered this fleshy column alluded to. The hernial sac was sloughy, and contained omentum and a small piece of intestine quite gangrenous. The peritoneal surface of the small intestine in the abdomen was inflamed, and the intestines were agglutinated by recently effused lymph. The result of the investigation made during the operation and after death tends to show—1st, that the hernia was of the femoral species; 2nd, that the descent had not taken place in the femoral sheath; 3rd, that it had passed through some unusual opening or slit in the pectineal portion of the fascia lata; 4th, that there was a usual development of the inner fibres of the pectineus, which had formed a fleshy column over the hernia. It appears also most probable that an epiplocele had existed for some time, and that a more recent descent of intestine had occurred, which had become strangulated.

Mr. Fergusson remarked that the case related inculcated the importance of the surgeon laying aside the dread entertained in former times respecting the making of an incision necessary to determine whether the case was or was not one of hernia. It was possible that if the operation in this case had been performed earlier, the patient might have been saved. The duration of the symptoms of hernia was more to be dreaded than the operation itself.

ON THE TREATMENT OF AXILLARY ANEURISM.

BY JAMES SYME, ESQ.,

Professor of Clinical Surgery at the University of Edinburgh.

The object of this communication was to suggest that in general, if not always, the old operation would be preferable to the method of Hunter for the treatment of axillary aneurism. With the view of supporting what might appear rather startling doctrine, the author combatted the generally received opinion, that the portion of an artery comprehended by an aneurism is not competent for the process of obliteration by ligature, and maintained that the mere circumstance of isolation from neighboring connexion while the vessel still retained its usual relation to the sheath should not render it unfit for the process in question. In favor of this position, he quoted the successful result of ten operations performed by him in the old way for the remedy of traumatic aneurism at the bend of the arm, and also the remedy by the same means, of a carotid aneurism too low in the neck for ligature without opening the sac, which, if allowed to proceed, would have proved fatal, not only to the patient, but to his assailant who inflicted the wound, and who would certainly have been hanged in the event of its proving fatal. The author further related two cases of axillary aneurism, not admitting of relief from ligature of the subclavian, in which amputation of the shoulder-joint was performed with success. But the principal ground of his suggestion was a case of axillary aneurism which had lately come under treatment in the Royal Infirmary of Edinburgh. The tumour was very large, distending the muscles of the axilla, and projecting above the clavicle. It was rapidly increasing, and already showed signs of impending gangrene; while the patient's general condition, as manifested by a pulse of 130, and wandering ideas, was not less alarming. Ligature of the subclavian being quite out of the question, before proceeding to amputation at the shoulder-joint it was deemed proper to ascertain the state of matters in the axilla. But as this could not be done without the risk, or rather certainty of a fatal hæmorrhage, unless the artery could be commanded in the first instance, an incision was made along the posterior edge of the sterno-mastoid, through the platysma myoides and fascia, so as to allow the finger of an assistant to reach the vessel where it issues from under the edge of the scalenus anticus and lies upon the first rib. The cavity was then opened, nearly seven pounds of coagulated blood removed, and both ends of the artery tied, as it was found to have been torn across. The patient made a good recovery, and was dismissed six weeks after the operation, able to resume his employment. The old operation, having thus succeeded in a case so formidable and unpromising, seemed worthy of adoption, not merely in cases unsuitable for ligature of the subclavian, but as preferable to the Hunterian method, on account of its greater facility, safety, and certainty. The author having upon two occasions tied the subclavian artery for aneurism with perfect success, had no prejudice against this operation, but was forced to the conclusion just expressed by his sincere conviction of what was due to expediency. He also begged to suggest that the means employed for effectually commanding the artery perhaps admitted of more extensive application. It had been used by the author thirty years ago in his first operation for the removal of the superior maxillary bone, in which excessive hæmorrhage had been erroneously anticipated, by making an incision between the ramus of the jaw and mastoid process, so as to admit a finger to compress the internal maxillary artery on the neck of the condyle. The author remarked that in this case the superior maxillary bone was removed for the first time in Great Britain, and that the operation is the earliest to be found in the records of surgery.

Mr. Erichsen observed that the manner in which the operation has been performed must elicit the admiration of everyone; but he could not admit that the case in any way influenced the application of the Hunterian principle in the treatment of aneurism. The author of the paper had not, he thought, drawn a distinction between aneurisms of spontaneous and of traumatic origin. In cases of traumatic aneurism at the bend of the elbow or elsewhere, Mr. Syme only followed the practice commonly pursued: he would lay them open, and ligature the artery on each side. No surgeon of the present day would think of placing a ligature on the brachial artery for aneurism caused by a wound made by venesection. It seemed to him (Mr. Erichsen) that the case before the Society was not a spontaneous but a traumatic aneurism, and too much caution could not be exercised by surgeons in any application of the principle proper to be pursued in the one case to that of the other. He contended that the progress of Mr. Syme's case was too rapid for a spontaneous aneurism, and, moreover, the disruption of the artery was too complete for that form of the disease. In his excellent work on Injuries of Arteries, Mr. Guthrie had shown with perfect clearness that in all cases of diffused aneurism in the axilla, the plan pursued in Mr. Syme's case should be resorted to. Mr. Erichsen then made some strong comments on the practice of ligature on the subclavian artery above the clavicle for diffused axillary aneurism. The tumour should be laid freely open, the pectoral muscles divided, and the artery should be ligatured at the point of injury. In cases of spontaneous aneurism, however, such a course of proceeding would be highly improper. He believed in cases of spontaneous aneurism the diseased condition of the artery was not confined to that spot at which its coats had given way. In Mr. Liston's case, in which he ligatured the subclavian artery,—the first operation of the kind in this country, —the subclavian was compared to the finger of a wet glove. Secondary hæmorrhage, the result of this state, came on, and the patient died. In the cases which had come under his (Mr. Erichsen's) observation, an extensive state of the disease in other parts besides that at the seat of aneurism, was generally to be found. In some instances, indeed, a diseased condition of the artery existed at the same spot on the opposite side of the body. He reiterated his caution to any attempt to overthrow a principle of surgery which had been established for seventy years by the practice pursued by Mr. Syme in the case under discussion. Although in this instance it was successful, it was only a solitary case; but axillary aneurisms were, in fact, the last cases in which an attempt should be made to subvert the Hunterian principle. Of all aneurisms they were the most liable to become diffused, and to run into a state of suppuration and slough. This was sufficient explanation why ligature in the subclavian artery above the clavicle had been less successful than the ligature of vessels for aneurisms in other parts of the body.

Mr. John Adams took exception to the principle laid down by Mr. Syme, and considered it was only applicable to cases of diffused aneurism in which there was no real, defined sac. In cases of an aneurismal sac at the bend of the elbow he had never found it necessary to lay open the tumour and tie both ends of the vessel. He had treated these cases sometimes by the application of a ligature above the seat of the disease, with perfect success. In other instances no operation was required, the careful application of pressure being found quite sufficient, and if cautions were exercised in its application, there was no danger of gangrene.

Mr. Ure considered that the means which Mr. Syme had resorted to for restraining the hæmorrhage in the case before them was the chief merit of the operation.

Mr. Curling expressed his regret that Mr. Paget was not present, as he could have given the particulars of a case of traumatic axillary aneurism, in which he performed an operation similar to that recommended by Mr. Syme in his communication. He (Mr. Curling) had only an imperfect acquaintance with the case, arising out of a casual conversation on the subject then under discussion; but it appeared that under the violent extension of the contracted arm of a lady, the axillary artery was ruptured, and an aneurism resulted. Pressure having been made on the subclavian artery, Mr. Paget laid open the aneurismal sac in the axilla, dividing the pectoral muscle, and tied the artery above and below the sac, with a successful result. Mr. Curling considered that some of the observations made by Mr. Erichsen in opposition to Mr. Syme's views really tended to show the advantages of the treatment which the author of the paper advocated. Mr. Erichsen had stated that in spontaneous axillary aneurism the subclavian artery was often diseased; that the aneurismal sac, if large, was inclined to slough or suppurate; that a ligature placed upon the subclavian did not intercept a free supply of blood to the aneurism by the subscapular artery. These were circumstances which showed that greater advantage might be gained by laying open the sac and securing the artery at the seat of the aneurism, than by tying a diseased artery a short distance above; and taking into account also the great fatality after ligature of the subclavian artery, Mr. Curling considered that there were strong reasons for making trial of the same treatment in spontaneous aneurism as would undoubtedly be proper in traumatic aneurism.

Dr. Hodgkin spoke at considerable length on the difficulties which sometimes presented themselves in determining which kind of operation was to be preferred. In the treatment of aneurism it was important to determine the contents of a sac. He related two cases in point. In one instance the contents of the aneurism were found to consist of matter resembling the olive-green powder in a puff ball; which of course could not be absorbed. In another case of large popliteal aneurism, layers of opaque and partly translucent substance formed the contents. From these facts it was clear that in some instances the old operation was the only one which could be safely resorted to.

The President mentioned a case which had lately come under his care at St. Bartholomew's Hospital, and which resembled the case mentioned by Mr. Curling. The patient, a woman, had suffered dislocation of the humerus, and eight or ten days after its reduction a large traumatic aneurism of the axilla presented itself. The necessity of tying an artery was obvious; but should the operation be on the axillary or the subclavian? In this case he acted up to a principle of surgery from which he never deviated when it was possible to carry it out. He accordingly tied the artery at the point of injury. Having made a large incision through the axilla, and the profuse hæmorrhage having been arrested by pressure, he succeeded in tying the artery above and below. The patient died, and on examination it was found that there was a fracture of the neck of the humerus, the pointed end of the shaft having torn the artery across.

Mr. Henry Thomson requested Mr. Syme, in his reply, to be good enough to state to the Society his opinion of the mode of arresting hæmorrhage by acupressure.

Mr. Syme, having been called upon to reply, said that the excellence of any surgical treatment must depend upon its facility, safety, and efficiency. They had been told by Mr. Adams that for the remedy of aneurism at the bend of the arm, ligature of the humeral artery was preferable to opening the sac and tying the vessel on each side of the aperture. But the former operation had always been regarded as very embarrassing, while the latter was extremely easy in execution. The same gentleman had expressed his preference for pressure in cases of this kind, although it required much time, with great care, and might lead to gangrene when improperly employed; while he (Mr. Syme) believed that opening the sac was not only much more certain, but also no less safe than speedy in its effects. Mr. Erichsen had drawn a distinction between traumatic and spontaneous aneurism that seemed equally new and incomprehensible. Hitherto the term traumatic had been applied to aneurisms caused by wounds penetrating from the surface to the vessel, while those have been called spontaneous which originated without any external opening. In the former case there was no ground for suspecting disease of the vessel, while in the latter there was always more or less suspicion of such a condition. But Mr. Erichsen placed in the former category all cases in which the disease could be traced to any sort of injury, forgetting apparently that there was hardly ever an instance of the disease that could not be traced to some blow or wrench or other strain upon the arterial coats, and that it was their giving way under such circumstances which constituted the ground for suspecting unsoundness of their texture. Thus, in the case which had been related to the Society there was no wound, and merely exposure to sudden elevation of the arm, so that the disease was truly spontaneous, in the usual sense of the term, and therefore afforded evidence of the most unquestionable kind in favor of the old operation. Mr. Erichsen had stated that the average proportion of deaths from ligature of the subclavian artery for aneurism was more than fifty per cent; but as it was much more easy to collect good than bad results, the true average would probably be nearer seventy-five than fifty per cent. of deaths. The operation for which he contended therefore did not seem by any means perfect; and as the three cases which he (Mr. Syme) had treated on a different principle terminated successfully under very unfavorable circumstances, the suggestion which he had taken the liberty of offering might not be altogether unworthy the attention of the Society. It had been long known that the danger of secondary hæmorrhage was greater from ligature of the trunk than from tying the orifice of an artery, and this difference should not be disregarded in balancing the merits of the old Hunterian operations. About a week ago he had amputated the leg below the knee of a man only forty years of age, in whom the arteries were so altered by calcareous deposition that they crackled under the forceps; and he showed a portion of one, several inches in length, which presented the appearance of an earthenware tube. It might have been expected that there would be secondary hæmorrhage from these most unsound vessels, and so there doubtless would have been if ligatures had been applied to the continuous trunks; but no such effect had followed the operation. In the case related by Mr. Erichsen, where Mr. Liston found the subclavian so unsuitable for ligature, and where a fatal hæmorrhage followed its application, the result might have been different if he had applied it to the orifice. In reply to Mr. Thompson's question, Mr. Syme said that he thought the needle process was objectionable on three grounds; first, that the ligature did not deserve the charges which had been brought against it; secondly, that if it did so, there was a much better substitute provided for it in "torsion" than the one in question; thirdly, that the needle process could very seldom be practicable. It had been said that the ligature caused gangrene; but this only showed unacquaintance with the meaning of surgical language, since the thread at once deprived the part embraced within its noose of vitality, and led to no action except the absorption requisite for separation. It had been further said that the ligature caused injurious irritation, subversive of the uniting process; but this also was inconsistent with the facts of daily observation, since, as every one knew, wounds were constantly healing through the principal part of their extent, although remaining open where the ligatures lay. He (Mr. Syme) had repeatedly tied the femoral artery without the discharge of more than a few drops of matter; and in wounds of the cheek, where it was usual to cut off the ligatures, so as to leave merely the knots on the inner side, the external edges were found to heal without any discharge whatever. Indeed, so far from regarding ligatures as hurtful, he had long looked upon them as useful, by maintaining a connexion between the bottom and surface wounds, so as to prevent that accumulation of blood in the cavity which is so apt to happen, and substitute an abscess for primary union. But if the ligature were objectionable, its place might be supplied by torsion much better than by the needle process. He did not think that this method possessed the advantages of the ligature, and therefore he did not employ it usually; but to show his pupils how effectual its application might be, he adopted it in the following operations, which one day lately he had occasion to perform in the Royal Infirmary of Edinburgh: removal of a mamma, excision of a large testicle, and amputation at the ankle-joint. Lastly, he was persuaded that the field for using the needle process would be found of the most limited extent, since it could only be adopted in cases where the vessel lay in the integuments or textures adhering to them; for the idea of pinning down the skin to the surface of a bleeding wound was too absurd for serious consideration. On the whole, therefore, he regarded this proposal as the merest nonsense, which never could have proceeded from a practical surgeon. He regarded it as one of those tubs which are constantly thrown out to amuse the whale, more especially the female whale, and which, when left to themselves, soon drift out of sight. He had no doubt the proposal in question would already have done so, except for the strenuous efforts to keep it in view by a medical journal published in London, which was understood to be very much under the influence of the proposer.

Mr. Spencer Wells would pass by the personal allusions of Mr. Syme, merely remarking that he thought the profession was deeply indebted to the eminent man who had introduced into surgery chloroform and other great improvements in surgical practice. He contended, in opposition to Mr. Syme, that acupressure was not only practicable, but in many cases a most advisable mode of proceeding. This was well illustrated in a case which he (Mr Wells) had lately operated. The anterior tibial artery was compressed by a needle, and the posterior tibial secured by a ligature. The needle was removed in forty-eight hours. No further trouble ensued. The ligature, however, remained five or six days, setting up suppuration, and retarding the cure. No doubt there are many cases in which the process is at present inapplicable, but with increasing experience these would probably diminish.

After the discusion had closed,

Mr. Syme stated that ten or twelve years ago he had proposed a mode of restoring the nose which seemed preferable to the frontal operation. This was, to make two flaps from the integuments of the cheek, unite them in the middle, and then secure their edges to the raw surface on each side of the nasal orifice. It appeared that this proposal had met with little attention in London, if reliance could be placed upon the surgical books published there, as they did not contain any notice of it. He therefore took this opportunity of placing before the Society a patient on whom the operation had been performed five weeks ago. They would see that a nose of the most ample dimensions had been formed, without any perceptible trace of the source from which it was obtained.

MEDICAL SOCIETY OF LONDON.

Mr. Hilton, F.R.S., President.

Mr. Price read a paper

ON THE TREATMENT OF CERTAIN DISEASED CONDITIONS OF THE HIP-JOINT BY COMPLETE AND PARTIAL EXCISION OF THE ARTICULATION.

The author said that what he was about to state to the Society was the result of much inquiry and considerable practical experience; and that it would be for the Fellows to frame their opinions regarding the merits of the operative interference in certain cases of advanced disease of the hip-joint not from the recital of theoretical observations, but from the strict accuracy of facts. It required no very extensive experience to prove that hip-disease in varied forms was of frequent occurrence, especially in young persons. In 153 instances of disease of different joints which had more or less come under his own observation in one institution alone—the Infirmary for Scrofulous Children at Margate—no less than 76 were confined to the hip. Of this number, 49 occurred in male, and 25 in female children, varying in age from three to sixteen years. Of this number, 10 died 13 were definitely cured, with useful limbs; 41 were greatly benefited, and the majority on the road to perfect recovery; 8, after remaining for a long time under treatment, improved but very slightly, if at all: in 2 instances more or less of the diseased joint was removed with great advantage; and of the 2 remaining cases no very correct information could be obtained as to the result which followed. Although many authorities on hip-joint disease had pointed out the proneness of certain individual joint-structures to fall into a diseased condition with a greater readiness than other component tissues, still, in whatever portion of the articulation the mischief commenced, total destruction might ensue.

Great difficulty always exists in the correct appreciation of hip-disease, when it has passed its earliest stages, as regards the exact seat of lesion. Sir A. Cooper believed that the synovial membrane, as a rule, was most frequently affected. Mr. Key held that the ligamentum teres was primarily involved. Sir B. Brodie states that the articular cartilages exhibit a greater proneness to take on a morbid condition; while other surgeons think that the osseous portions show the greatest tendency to diseased alterations. No matter in what specific structure unhealthy action commences, the author believes that total destruction of the articulation may take place, although the various destructive changes that ensue are dependent on different causes. Disease of the joint may originate in one structure only, or it may simultaneously include both hard and soft tissues.

Before pointing out the various morbid changes occurring in the latter forms of hip-joint disease which call for the most strenuous exertions and skill of the practical surgeon, the author gave a very precise account of the history of the operation from the year 1818 to the present time. Altogether he had collected 67 cases in which the operation had been resorted to with more or less success. Of this number he had authenticated particulars of 59 cases, so that the deductions he would draw might be received with confidence.

The history of the operation was interesting. Anthony White was the first British surgeon who resorted to it in the year 1818; but only twice was it repeated during nearly thirty years—once by Mr. Hewson, of Dublin 1823, and once by Sir B. Brodie in 1836. The proceeding then remained in this country quite in abeyance till revived by Mr. Fergusson in 1845, when many surgeons followed the example of this distinguished operator. Amongst its earliest advocates were Mr. Henry Smith, (to whom the profession is much indebted for several clear and able practical essays on the subject,) Messrs. Walton, French, Morris and Cotton. Within the past few years, Mr. Jones of Jersey, Mr. Erichsen, Mr. Hancock, Mr. Bowman, Mr. Partridge, Mr. Shaw, Mr. Stanley, the author, and many other surgeons, had frequently resorted to it, with more or less success. When the operation was first performed, it was merely applied to the removal of the diseased head of the femur, which had become dislocated on to the wing of the pelvis and severed from its pelvic attachments. The most enthusiastic operators shrank from adopting it when there existed evidence of implication of the acetabulum, for it never occurred to the promoters of the operation that any direct surgical interference could be applied to the pelvic portion of the joint. As time advanced, and the merits of the operation became apparent, surgeons grew bolder, and undertook cases in which extensive mischief involved not only the head of the femur, but the acetabulum. A more correct knowledge of practical pathology soon widened the field for the application of bold and resolute interference, and now the most distressing and apparently almost hopeless cases are submitted to operation with very great advantage.

The author then proceeded to divide the further consideration of the subject into the following heads, as the merits of the operation would be more clearly ascertained when it was shown for what condition of disease the proceeding had been practised:—

Firstly—Where the diseased head of the femur was dislocated from its acetabular connexions, and no disease of the pelvis apparently existed. For this condition sixteen instances were recorded. In ten the operation was perfectly successful, as far as giving the patients useful limbs and much-improved conditions. Of the remaining six cases, three were perfectly successful so far as the immediate results of the operation were concerned, the patients living for periods of from a few months to two years. In the other three instances death followed; in one case through erysipelas on the fifteenth day after operation; in the other two from general debility, irritation, and tubercles of the lungs.

Secondly—Where the diseased head of the femur was dislocated from the acetabulum, and more or less disease of the acetabular portion of the pelvis existed. Eighteen cases were submitted to the operation when the local parts were so involved. Of this number, only six positively recovered; but before allowing the great disparity of successful and unsuccessful terminations to influence conclusions, it was of importance to sift individual histories of the cases. Of the twelve unsuccessful instances, only in five did a fatal result follow as the direct effect of the operation, and in one it was owing to erysipelas. The remaining six which ultimately terminated fatally were all more or less improved by the operative measures which were adopted. In two, tubercular disease of special organs prematurely hurried the patients to the grave; in a like number, morbid conditions of the kidney proved the direct cause of mortality; while in another instance, where health and cure were established, valvular disease of the heart proved fatal; and lastly, erysipelas carried off a patient who probably would have recovered. The success, then, in these eighteen instances was not so discouraging when it was remembered that the proceeding was adopted at a period too far advanced to lead to any brighter hope of success. Here the operation was employed not solely as a curative proceeding, but as one of palliation, and it is in this light that it must be frequently used.

Thirdly—Where the diseased action was more or less confined to the synovial and cartilaginous structures of the articulation; and if the bony portions of the joint were involved, such inclusion was not of the nature of caries and necrosis. Five operations only were performed when the parts were in this condition. The author had resorted to the proceeding in two instances, and with much success and advantage. In one case the operation had been performed about three years since, and he now with great satisfaction showed to the Society the little boy on whom he had operated. Out of five cases, three were completely cured; one lived for fifteen months, and then died from causes apart from disease of the hip; but the fifth case succumbed on the twentieth day after the operation from increasing debility and irritation.

Fourthly—Where the integrity of the joint was more or less destroyed, either femoral or pelvic, or both, although no dislocation or rupture of the capsular ligament had occurred. In this class were included fourteen cases, of which eleven recovered with more or less useful limbs, or were on the high-road to recovery; three died, although at periods varying from three days to three months.

Fifthly—Of those cases regarding which the author possessed no exact knowledge of the details of surgical interference. Under this heading were five instances, in which recovery was known to have taken place in three cases, and death, it was believed, in two. Of the entire number of cases thus recorded (59), 33 recovered with good and useful limbs, and with greatly benefited constitutions; 11 were partially successful—i.e., the patients were greatly benefited both locally and constitutionally, and lived for periods between three months and two years, and then died more from other causes than from a recurrence of the disease which demanded interference. Fourteen deaths resulted more or less directly from the operation; but it would be unfair to say that every case did so, as the operation was occasionally performed when, perhaps, but too slight grounds really existed for any result beyond slight palliation. In one case only had the author not been able to obtain the exact result.

These 59 operations were performed on 53 occasions by British surgeons, in 5 by American operators, in 1 by a French surgeon. The author did not wish to include the 8 cases which are scantily mentioned in the works of various German practitioners.

Attention was next drawn to the abnormal conditions in which the parts concerned in disease had been found at the time of operating. Considerable stress was laid on the difference between caries, properly so called, and inflamed and ulcerated bone; and also on the great frequency of a necrotic state of the bony parts in far advanced stages of the disease, without even rupture of the capsular ligament and luxation of the head of the femur. Caries, when affecting the head of the femur, was often limited strictly to that bone; and although various surgeons had eschewed even a trial of the operation, because they believed in the certain inclusion of both femoral and pelvic portions of the joint, still the author, from what he knew after a fair amount of experience, must deny compulsory existence of the disease in both osseous structures. Complete dislocation of the caput femoris must not be considered so frequent an occurrence of advanced hip disorganization as some authors had stated. Although many surgeons who had never attempted removal of the pelvic portions of the joint had denied the possibility of removing such when diseased, still it needed but few words to assure the Fellows, that the entire acetabalum could be taken away, when necessary, with comparative freedom. On the table were the head of the femur, and the greater portion of the acetabulum, which the author had lately removed with success; and the cases of Messrs. Fergusson, Erichsen, Hancock, Bowman, Jones, of Jersey, &c., were sufficient to show the falsity of such admissions. To Mr. Hancock belonged the principal merit of having clearly explained the easy way in which diseased portions of the pelvis may be removed.

The author then, as fully as time would admit, pointed out some of the principal features which should guide the surgeon in selecting cases for operation. The manner of performing the operation was detailed, and great stress placed on the importance of subsequent mechanical treatment. The result to be wished for was a limb as useful as Art could contrive. Bony union of the cut end of the femur with the pelvis was to be avoided; for it was found that consolidation and attachment by means of a firm fibrous tissue allowed a very extensive use of the limb, and one amply sufficient to bear the weight of the body.

Before closing his remarks, the author wished to impress on the Society that the operation had only been, as a rule, adopted on such occasions as when life was in danger, or rendered miserable by constant pain and anguish; and also, that it had frequently been advisable to resort to it simply as a palliative means of affording some relief from suffering. Two cases were exhibited to the society—one, Mr. Fergusson's first case, in which he had operated just fifteen years ago, and one of the author's, in which the head of the thigh-bone had been removed about three years since. In both instances recovery, with exceedingly useful limbs, was complete, from fibrous union forming excellent false joints.

The most convenient instruments for executing the operation, pictures of the splints for mechanical treatment, and various preparations of the parts removed in the author's cases, were exhibited to the Society.

After a few complimentary remarks from the President on the interesting nature of the paper,

Mr. Erichsen spoke at length. He congratulated the author on the able manner in which he brought the subject under the notice of the Society, and the faithful way in which he had recorded every feature relating to the operation. He had several times resorted to the complete and partial removal of the articulation, and with a success which gratified him. In one of his cases he had taken away the head of the femur, the entire acetabulum, a portion of the crest of the ilium, and the tuberosity of the ischium. A perfect cure resulted. He fully coincided with the author in the majority of points to which he had alluded. The speaker very clearly described the most important features which generally enabled the surgeon to surmise the existence of disease in the pelvic portion of the joint, and entered at length into various interesting particulars relating to the performance of the operation.

Mr. Henry Smith, from his early association with the history of the operation, could not but look with pleasure on the great strides it had made during the past few years. He agreed in all the particulars which had fallen from Mr. Price, but wished that the author had entered a little more fully into the consideration of the performance of the operation when disease existed in other organs. From what he had heard he believed that the operation had been resorted to when too much disease of other structures existed, and would, therefore, wish to have the co-existence of disease in other organs of the body always well considered prior to operation. He (Mr. Smith) related one or two cases in which the operation had not been performed on account of mischief in other parts, which appeared sufficient in itself to cause death.

The president put some questions to the author regarding the formation of a new acetabulum, and the conditions which dissection after death revealed.

Mr. Bryant made some observations regarding the class of cases which he considered unfit for operation, and reminded the Fellows that a number of cases got well without any surgical proceeding.

ECZEMATOID ERUPTION FOLLOWIMG THE USE OF CHLOROFORM.

Mr. J. F. Clarke inquired if any Fellow of the Society had observed an eczematous eruption follow the inhalation of chloroform? A lady under the care of Mr. Curling and himself had inhaled chloroform previous to an operation for fistula in ano. About three days afterwards the entire surface of the body was covered by a red papular eruption, attended by great irritation, but no other marks of constitutional disturbance. There was no sore throat, and the tongue was natural. The eruption soon assumed a scaly character, the scales being thrown off in very large quantities. The process of "peeling" continued for three weeks, at the end of which time the surface had assumed its natural appearance, with the exception of the skin on the calves of the legs and some isolated patches in other parts. It was at first supposed that the patient had contracted scarlet fever, but the absence of constitutional symptoms, and the peculiar character of the eruption, were sufficient to set aside this view.

Dr. Hyde Salter had not seen any eruption follow the use of chloroform, but he had observed in one case a general erythematous eruption supervene on the use of iron.

Mr. de Meric read a paper on

INJECTIONS OF TRISNITRATE OF BISMUTH IN GONORRHŒA.

The author promised that he would confine his remarks to the therapeutics of the disease; but incidentally stated that true gonorrhœa contained a contagious principle which might be called a special poison, whilst another kind of urethral discharge existed which was a mere hypersecretion. Mr. de Méric gave the broad characters of the two forms, and then related a series of experiments which he had made at the Royal Free Hospital as to the efficacy of injections of the trisnitrate of bismuth. He had refrained from using the injections in the inflammatory stage; and had principally prescribed them in chronic cases, whether these had followed the acute period, or had been at the outset of the chronic painless character. No internal medicines had been given, and the proportions employed for the injections had gradually been carried from half a drachm to a drachm of the insoluble salt per ounce of water. A special register of the case had been kept, from which it appeared that, out of 140 patients which had used the injections, a great number were still under treatment, and a good many had attended irregularly, so that positive results were obtained only in 52 cases: out of those, 36 patients had been noted as cured; 5 as much better; and 11 as not improved at all. The cures—viz., the cases in which the discharge completely ceased—were obtained in twenty-two days, on an average; the partial cures took place on an average of twenty days; and the unsuccessful cases remained under the bismuth treatment for twenty-five days on an average, being then put, with good results, on the copaiba-and-cubebs mixture. Mr. de Méric next alluded to some cases in private practice; to the proportion of swelled testicle, buboes, and other complications which had been observed in the hospital cases; to the symptoms observed during the use of the injections; to the risk of strictures &c. &c.; and concluded by stating that he was by no means wishing to extol the use of the trisnitrate of bismuth in gonorrhœa, though he considered it very useful, especially in gleet; but that his object, in instituting the experiments, had been to test the value of a remedy which had been highly lauded in Paris.

Mr. J. F. Clarke would have wished that the author had specified how long the disease had lasted, and what treatment had been used, before the injections of bismuth had begun, and also that something had been said of the temperament of the patients. He (Mr. Clarke) recollected a great authority, who had distinctly stated that gonorrhœa would, when inflammatory symptoms had subsided, get well of itself.

Dr. Harding inquired what might be the *modus operandi* of the bismuth when injected, whether it was thought to furnish merely a coating, or whether it possessed any specific influence.

Mr. Henry Smith made some remarks touching the urethral sponge which Mr. de Méric had shown when speaking of caustic applications to the urethra. He (Mr. Smith) stated that the instrument was of his invention.

Mr. Bryant thought the injections of bismuth should not be used in common cases, and considered that the saline treatment or copaiba was sufficient without injections. Tannin had been very successful in his hands, and had the advantage of yielding a very clean injection. He would, however, try the bismuth in chronic cases, and did not believe, especially from investigation of his own, that stricture was so frequently a sequel to injections as has been alleged.

Mr. Miller expressed his belief that we might do without injections, and rely upon the use of internal remedies.

The President said that the action of the bismuth was well known to be very beneficial in pyrosis, and that analogy would thus lead to view its employment favorably in gonorrhœa.

Mr. de Méric briefly replied to the observations made, and clearly dissented both from the *authority* who said that gonorrhœa would get well of itself, and those who had stated that stricture frequently followed upon the use of injections. Herein he was glad to be supported by Mr. Bryant's experience. He (Mr. de Méric) did not think that bismuth possessed any specific influence, and mentioned that M. Caby's patients passed urine more easily with the coating of bismuth than without it. The author congratulated Mr. Smith on the invention of the urethral sponge, and wished to be understood as having undertaken the bismuth experiments principally in order to test the value of these injections, the latter having been highly recommended at Paris. He did not think they would drive other injections from the field, but that in chronic and tedious cases the bismuth would be found very useful.

Mr. Henry Smith read a paper

ON THE PATHOLOGY AND TREATMENT OF PAINFUL ULCER OF THE RECTUM.

He first made some observations upon the simpler forms of ulceration met with about the anus, describing that condition occurring in persons who neglect cleanliness, or who have suffered from gonnorrhœal discharges. These cases are, for the most part, simple sores seated outside the verge of the anus, and may be readily cured by careful ablution, and the use of astringent lotions. The true painful ulcer, or fissure of the anus, is situated within, and upon, the sphincter ani and is not visible except when the most careful examination is made, and then it appears to be simply a crack; whereas, in reality, when the part comes to be carefully exposed, the morbid condition is found to consist of an ulcer, varying from the size of a split pea to a fourpenny-piece or larger, varying also in shape. There is generally a small external pile covering the seat of this ulcer, which is, in nine cases out of ten, met with at the posterior verge of the anus. Women are more liable to the affection than men. As regards its pathology, the author was of opinion that the disease was originally produced by some irritation excited at the point affected by some retained fæcal or other matter, and as the disease was frequently found associated with hæmorrhoids, and an external tumour was in many instances seen to be, as it were, overlapping the ulcer, he was of opinion that the morbid process might be the effect of the retention of the irritating matter from the mechanical impediment offered by the small tumour in question. The increase and persistence of the disorder were due to the periodical action of the sphincter. The symptoms, although so very peculiar, were very liable to be overlooked, or to be referred, especially in women, to disorders of other organs, particularly of the womb, and very gross maltreatment had been the result. One case in particular was mentioned by the author, where a lady had been confined to the house, and had undergone prolonged treatment, the real nature of the disease not being discovered.

The treatment which should be adopted in the more simple cases, where the disease had not long existed, and where the ulcer could readily be exposed, was the application of caustic and astringent lotions. A persevering use of these remedies, will cure many cases; but when the symptoms are excessively severe, and the ulcer cannot be brought well into view, another mode of treatment is to be adopted. The principle upon which the surgeon acts in the treatment of these cases is the same which teaches him the use of the swing splint in fractured limbs or diseased joints; the employment of a common splint applied to the forearm for wrist-drop, or the division of the levator palati muscle, as recommended by Mr. Fergusson, prior to the uniting of the edges of a cleft palate—that of placing the part in a state of complete rest. It was upon this sound principle that Boyer, either consciously or unconsciously, acted when he recommended the complete division of the sphincter ani for the cure of this painful disorder. A modification of the same plan is now chiefly practised, and Mr. Smith was amongst those who adopted the limited incision as originally recommended by Mr. Copeland. It was considered by some surgeons that the simple division of the ulcer did not include any of the sphincter, but the author was inclined to agree with Mr. Curling, that in most cases where this limited incision only was made, some of the fibres of the sphincter must of necessity be divided; and hence the almost instantaneous and perfect relief. The author practised the operation by introducing a narrow-bladed straight knife upon the finger previously introduced into the bowel, and then cutting from within outwards. Several cases were related where the most admirable results followed the employment of this simple operation.

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PATHOLOGICAL SOCIETY OF LONDON.

Mr. Fergusson, President.

DISEASED SUPRA-RENAL CAPSULES.

Dr. Peacock exhibited specimens of the above. The skin was extremely dark, the bronzing being in some places more marked than in others. The patient was a youth who had been formerly the subject of hip-joint disease. Shortly before death he had an attack of convulsions of an epileptiform character. Both capsules were much diseased, and probably the seat of tuberculous abscess.

CASE OF OPEN FORAMEN OVALE.

Dr. Peacock showed a case occurring in a young woman who died a few days after admission to St. Thomas's Hospital, of acute tubercle. There was no appearance of cyanosis. Some degree of contraction of the mitral valve co-existed with an entirely open foramen ovale. The patient was as delicate as a child, but there was no history of cyanosis, which was a remarkable fact as bearing on the cause of that condition.

EAR CRYSTALS.

Mr. Toynbee showed an example of an ear in which the ear crystals were much more abundant than usual. The patient had been deaf.

KIDNEY AFFECTED WITH CYSTIC DISEASE.

Dr. Salter exhibited, for Mr. Hogg, a large kidney (the right), measuring 8½in by 4in, converted into a mass of cysts ; no proper structure remaining. The patient had long suffered from symptoms of urinary difficulty, which were referred to different parts of the apparatus by different surgeons, and had daily passed pus in the urine for several years. Some creamy semi-solid substance was found in the cysts, consisting of organic and mineral matter.

INJURY TO THE FEMORAL ARTERY.

Mr. Thompson exhibited, for Mr. Gaye of Williton, an example of injury to the femoral artery, in a man aged thirty-one years, which was followed by gangrene in two or three days. Mr. Gaye amputated the limb, and the man appeared to improve at first ; but gangrene reappeared in the stump and he died in a few days. The injury, which appeared to be inflammation of the vessel producing a firm clot in the interior, was caused by a strain in jumping.

TUMOUR OF THE ABDOMEN.

Dr. Hyde Salter presented a large cyst-like tumour found in the abdomen of a dissecting-room subject. It was adherent to the liver. No sign of abdominal disease had been observed during life. It had all the appearance of a cæcum. This and the kidney shown above were to be examined fully, and again reported on by Dr. Salter.

TUMOUR OF THE TESTICLE.

Mr. Holmes exhibited a specimen removed from a child three years old. The growth commenced two years before, and increased rapidly latterly. It resembled hydrocele in external appearance, and weighed nine ounces after removal. It consisted chiefly of fibrous tissue, and was evidently of innocent character.

VERMIFORM SUBSTANCE PASSED FROM THE BLADDER.

Dr. Hyde Salter showed this, which was taken for a worm by the first observer, to be simply a clot of fibrine. The patient had had hæmaturia for nine years, commencing after a strain received in lifting a heavy weight. It was most probably a cast of the ureter, made of blood coagulum.

Mr. Christopher Heath showed

A CONTRACTED PELVIS,

removed from a female aged seventy-four, which exhibited the changes usually found in mollities ossium the acetabula being thrust upwards, and the rami of the pubes projecting forwards with a narrow interval between them. The opening of the pelvis was thus much narrowed, and somewhat of a heart-shape, the antero-posterior measurement at the brim being 3 1-2 inches, while that of the inferior aperture was only 2 3-8 inches, owing to the great bend of the sacrum. The bones of the pelvis were flexible, but those of the limbs were brittle and filled with fat, and exhibited numerous fractures. The woman had been the inmate of a workhouse all her life, and was apparently a virgin, the hymen being entire, and the uterus, &c. very small. She had only been bedridden for two years prior to death. No history could be obtained with regard to the state of the urine.

Mr. Heath also showed

A DISEASED AND ANCHYLOSED KNEE-JOINT, REMOVED BY EXCISION.

This was from a boy aged eleven years and a half at the time of the operation (1858), who had suffered more or less from the disease of the joint, following scarlet fever, for six years. He was admitted into one of the metropolitan hospitals with an abscess in the joint in 1857, and remained under treatment for seven months. He was brought to Mr. Heath at the St. George's and St. James's Dispensary in June, 1858, with the knee firmly fixed at a right angle, slightly swollen, and with several discharging sinuses which led to bare bone. In the operation, the joint was found to be firmly anchylosed, with the patella fixed upon the external condyle, and the entire joint was therefore removed in a wedge, a small additional slice of femur being afterwards cut off to allow the limb to be straightened with facility. The specimen exhibited had been slightly macerated in order to remove the thickened synovial membrane, but the cartilages were left, showing their erosion and the exposure of the articular ends of the bone. The anchylosis between the femur and tibia was only fibrous on the inner side, but on the outer side bone had been developed, as was seen on a partial section. The boy made a good but tedious recovery, the sinuses continuing to discharge for some time, and even now weeping occasionally. Mr. Heath showed casts illustrating the past and present conditions of the limb, and a photograph of the boy's present state, the shortening of the limb being exactly 2½ in., so that with a high boot he has been able for months to get about most satisfactorily. Mr. Heath also drew attention to the fact that the epiphysis of the femur had been entirely removed, and that it would therefore be very interesting to watch the after-growth of the limb.

APOPLEXY OF THE PONS VAROLII.

Dr. Bristowe presented a case which was brought into the hospital in a state of stertor, and soon died ; consequently the history was imperfect.

INTESTINE IN TYPHOID FEVER.

Dr. Bristowe showed the intestine of a patient who died after five days only of duration of the fever. There was thickening of Peyer's patches, but not ulceration. Dr. Bristowe brought forward some interesting statistics relative to ulceration and perforation of the intestines.

Mr. Ballard has seen a case in which he believed perforation of an intestine had been recovered from.

Dr. John Ogle exhibited the three following specimens :—

I.—EXTRAVASATION OF BLOOD INTO AND SOFTENING OF THE PONS VAROLII AND MEDULLA OBLONGATA IN AN EPILEPTIC ; TUMOUR IN CEREBRAL HEMISPHERE.

This case was that of a woman, aged forty-eight, the subject of epilepsy and insanity for, it was thought, two years, who was admitted into the Somerset Lunatic Asylum about three weeks before death. When admitted she was suffering from "drowsiness," which existed for almost the whole day, but from which she could be roused. Shortly after admission she had two apoplectic attacks, with an interval of three days, and subsequently "giddiness" came on which was so extreme as to oblige her to keep her bed. She died after being comatose for three days.

After death, the cranial bones were found healthy, and also the cerebral membranes, excepting the dura mater at one part covering the outer and back part of the left cerebral hemisphere, where it was lined to a short extent by a thick, tough piece of fibrous membrane, by which it was firmly adherent to the surface of the cerebral convolutions. At this exact part a rounded, firm, white mass, of the size of a pigeon's egg, was found imbedded in the brain structure, and projecting as far as the surface. This mass had all the appearance of a strumous deposit. The brain tissue beneath, and internal to this tumour, was softened, and of a creamy color, and the septum and inner surface of the ventricles were also softened. The medulla oblongata and pons Varolii, especially at their posterior or upper parts, were very much softened, and, on section, presented a vast number of spots of ecchymosed blood.

II.—EXTENSIVE EXTRAVASATION OF BLOOD INTO BOTH SUPRA-RENAL CAPSULES; EPILEPSY, ETC.

The case was that of a patient, aged forty-three, who had been epileptic and idiotic. He had had almost a continuation of epileptic attacks by night and day for a fortnight before death, and previous to his death he was extremely comatose.

On post-mortem examination, slight pleurisy and grey hepatization of the lung were met with, and both the supra-renal capsules, besides being highly congested, had their central parts broken down by large clots of extravasated blood. The cranium and brain structure were healthy; but the veins of the scalp, and also the cerebral veins and sinuses, were exceedingly full of blood.

III.—FRACTURE OF THE HEAD OF THE FEMUR (APPARENTLY DURING LIFE), THE RESULT OF INJURY SUSTAINED BY JUMPING, IN A MANIAC.

The summit of the head of this bone was separated from the other parts, and was much softened, the fractured surface of the neck being also softened. The specimens were removed from the body of a maniac, aged forty-one, who for many months had been in the habit of jumping and stamping violently. It was suddenly found that she was unable to stand or get out of bed, and it was thought that she might have broken the neck of the femur. No alteration in shape or length of the limb was seen, but she was never again able to leave her bed. She eventually died of phthisis and perforation of the bowel, five months after the supposed accident to the thigh-bone.

On examination after death, extensive ulceration of the cartilage in the acetabulum was found, and much pus escaped on cutting down to the joint. The point of special interest was to determine whether the fracture of the head of the bone was accidentally made during the post-mortem examination, the bone being previously carious and brittle; or whether the fracture was effected at the time of the supposed accident, and was the direct and sudden result of the violence of jumping, stamping maniacally, &c., the diseased state of the bone following the fracture being secondary to it.

The above three specimens were sent to Dr. Ogle by Dr. Boyd, of the Lunatic Asylum at Wells.

NÆVUS OF LARGE SIZE.

Mr. Gascoyne exhibited this specimen, from a patient who was the subject of numerous nævi; one involving the parotid gland, and causing death by suffocation; one also was seen in the intestine.

FIBRO-NUCLEATED TUMOUR IN THE MAMMARY REGION OF A MALE.

Mr. Ward showed a specimen removed by Mr. Adams from a man aged forty. It had been of very slow growth. The mammary gland was distinct from the formation, as shown by careful dissection.

COMPARATIVE ANATOMY AND PATHOLOGY.

Dr. Crisp showed some gall-stones from a spotted cava. Also, an extremely large spleen from the wild hare, which weighed 3 oz. 120 gr.

Dr. Wilks presented the following specimens:—

I.—HYDATID IN THE HEART.

This specimen was given to him by Mr. Henderson, of Deptford, who was called upon by the coroner to make a post-mortem examination of the body of a girl, aged nineteen, who had died suddenly. She had always enjoyed good health, never having suffered from shortness of breath, dyspnœa, or other symptoms, when one night, after partaking of a hearty supper, she instantly expired. There was no disease of the head, lungs, or other part, excepting the heart, on opening which an hydatid cyst, of the size of a billiard ball, was found loose in the left ventricle. It was filled with a thin colorless fluid, and the interior showed abundance of echinococci by the microscope.

At the apex of the heart was a hard, cartilaginous, semi-opaque structure, about the size of a half-crown; this extended quite through the substance, and on the interior presented a cup-shaped form. It was here evidently that the hydatid had for some time rested, and at last becoming detached, had so obstructed one of the orifices of the ventricles, that its action had ceased. The hydatid had, no doubt, formed in the apex, and then gradually become expelled into the ventricle.

II.—LARYNX AND TRACHEA AFTER A SCALD.

A child, aged two years and a half, swallowed some boiling water. In the course of a few hours the dyspnœa became so urgent, that she was taken to Guy's Hospital. Having then ceased to breathe, Mr. Bankhart, the house-surgeon, performed tracheotomy. Respiration returned, and the child was apparently doing well for some time, when inflammation of the lungs came on, and she died in three days. There was found acute inflammation of the whole of the air-passages, combined with pnéumonia. The under surface of the epiglottis and the interior of the larynx and trachea were covered with false membrane; while the bronchial tubes were filled with purulent mucus. Dr. Wilks brought the case forward as exemplifying the fact that inflammation of the windpipe of a child is disposed to be of the croupous kind, and, therefore, tended to corroborate the opinion that croup is dependent more upon the anatomical structure of the organ as it exists in childhood than upon any pathological peculiarity in the nature of the complaint.

Dr. Crisp thought the membrane of croup was peculiar to the disease, and that its occurrence at a peculiar period of life indicated this.

Also :—

PORTIONS OF FIBRINOUS CASTS FROM THE LARGER AND SMALLER BRONCHIAL TUBES.

These bodies, like miniature branches of a tree, were spat up during coughing by a man who had been ill a year, and who had been every few days spitting up similar fragments, which were likened by the patient to pipes of maccaroni, having the appearance of a mould of the bronchial tubes down to their smallest ramifications. Almost every kind of remedy had been prescribed, but the chief relief was obtained from the inhalation of the vapor of boiling water containing liquid pitch. This inhalation was used three or four times daily. Microscopical examination showed the smaller tubes to be composed of many delicate fibres, much clear granular matter, partly highly refractive, and also occasional largish opaque bodies of an oval form, with many smaller rather indistinct bodies, probably of a cell nature. The larger and thicker portions of the casts contained but few cells or rounded bodies, but numbers of strong fibres, with firm granular matter and decidedly fatty material, and also opaque yellowish matter with other elements like altered epithelium. No distinct epithelial bodies were seen.

This case was brought forward in connexion with similar cases presented to the notice of the Society on previous occasions by Dr. Peacock, Mr. Nunnely, and other gentlemen.

HEAD OF THE FEMUR EXCISED.

Mr. Maunder exhibited the head of the femur excised after chronic disease. The bone was dislocated, the ilium was diseased, and a small portion of the acetabulum was removed also.

A PORTION OF VILLOUS TUMOUR OF THE BLADDER.

Mr. Bryant showed the above, which had been passed from a female patient by the urethra. She had been the subject of hæmaturia, and had been suspected to suffer from stone, the stream of urine often stopping; none, however, was found. The fragment in question proved to be a portion of a villous tumour.

Dr. Hicks read an elaborate report detailing the microscopical appearances of the portion passed.

NECROSIS OF FRONTAL BONE.

Mr. Bryant also showed a specimen of necrosis of a very large part of the frontal bone from a child. No cerebral symptoms were observed, and the child was going on well.

BURSAL TUMOUR FROM THE KNEE.

Mr. Sydney Jones exhibited a specimen which he removed from a woman, aged thirty-nine. It was large, very thick, and of slow growth. The result was successful.

BONES FROM A CASE OF EXTRA-UTERINE FŒTATION.

Mr. Jones also showed the above, which were met with in the practice of Mr. Sutcliffe, of the West Herts Infirmary, and were removed from a woman upwards of fifty years of age. A tumour was observed, which remained dormant twelve years. The bones were discharged per anum during a period of two years subsequently. The woman was now perfectly well.

Dr. Ogle exhibited three specimens of

HOOPS OF CALCAREOUS DEPOSIT IN CONNEXION WITH THE SURFACE OF THE HEART AND SURROUNDING THAT ORGAN.

Case 1 was that of a man, aged thirty, who "caught cold," as was stated, and had since suffered from ascites. The urine was found albuminous, and he frequently suffered from epistaxis. He suddenly became comatose, and speedily died. After death the coma was found to have been owing to extensive extravasation of blood into the right corpus striatum and cerebral hemisphere. The kidneys and liver were diseased, and the spleen was enormously large, being occupied by a considerable deposit of fibrinous material. The heart was healthy as to its walls and cavities, but recently-deposited fibrine was found attached to the aortic and mitral valve flaps. The two layers of pericardium were everywhere firmly adherent, but especially so at the base of the heart; and embedded in the adhesions, corresponding to the sulcus between the auricles and ventricles, was a ring of calcareous matter encircling the heart entirely.

Case 2 was that of a girl, aged seventeen, who had had rheumatic fever four years previously to her admission into St. George's Hospital, and since then had always been subject to palpitation. When admitted, the pulse was 120 and feeble, and the jugular veins were distended. The heart's action was tumultuous, and a very loud mitral murmur was heard. The urine was albuminous. She died four days after admission. Dr. Ogle found the abdominal organs very congested, and the heart's walls were much thickened, and its cavities dilated. The mitral valve flaps were thickened. The two layers of pericardium were everywhere adherent, and in the subserous layer at the fossa between the auricles and ventricles was a ring or hoop-like mass, of about the thickness of a goose-quill surrounding the base of the heart. The coronary vessels were natural.

Case 3 was that of a man, aged forty-seven, who for many years had suffered from cough, dyspnœa, ascites, and anasarca, at various times; at one period, however, being apparently well for the space of three years. He got the greatest relief from elaterium, with digitalis and cantharides. Shortly before death nothing was found by the stethoscope, &c.,

about the heart. About ten days before death he became hemiplegic, the paralysis, however, quickly becoming entirely removed. After death, a firm ring of calcareous matter was found about the heart opposite to the fossa between the auricles and ventricles; but also connected with this hoop-like mass were two plates of calcareous matter connected with the pericardium, covering the front and the back part of the right side of the heart. Throughout, the two layers of pericardium were firmly adherent, so that they could not be separated from each other or from the calcareous matter without much trouble.

In none of the above cases was true bony structure found by the microscope in the calcareous masses.

Dr. Ogle also exhibited

AN ANEURISM OF THE INTRA-THORACIC AORTA, IN CONNEXION WITH WHICH ALTERATIONS IN THE SIZE OF THE PUPIL HAD BEEN OBSERVED DURING LIFE.

The specimen was shown with reference to the supposed influence which pressure from various causes upon the numerous branches of the sympathetic nerve may in some cases exert upon the pupil of the eye. The subject had been dwelt upon in a communication to the Royal Medical and Chirurgical Society (see "Transactions," vol. xxi.), and this case alluded to, but not described at any length. The case was that of a woman aged forty, who nine or ten months previously had had a swelling a little to the right of the sternum. A few weeks before death, a slight swelling was first perceived between the third and fourth ribs on the right side, which gradually increased until it became as large as a moderate-sized man's fist. A sharp click was heard with the second sound of the heart over both scapulæ, and specially at the central part of the right one, and there was a good deal of pain in the region of the swelling and down the right arm. Subsequently a systolic bruit was heard at the heart's apex, and the swelling extended to the left and downwards; crowing inspiration and orthopnœa came on. About three weeks before death, the pupils of the eyes became more than usually dilated; and two days later the right pupil was observed to have become more dilated still, and much larger than that of the opposite eye. Before death œdema of the right arm came on.

On post-mortem examination, an aneurism of the size of a cocoa-nut was found arising from the upper part of the ascending portion of the thoracic aorta. This had produced absorption of the right side of the sternum, of the lower border of the second rib, as also of the third rib, the "*sternal end of which was found loose in the aneurismal sac.*" The first and second parts of the thoracic aorta also were greatly dilated; but the heart and its valves were healthy. The lower part of the upper lobe of the right lung was extensively hepatized.

In such cases, it could hardly be but that the aneurismal tumour, pressing backwards and upwards, would come in contact with some of the branches and subdivisions of the sympathetic nerve at the upper part of the thorax, and in this way, according to the degree and rapidity of its pressure, irritate or paralyze them; and according to the kind of action produced so might the radiating fibres of the iris, which are supplied by the sympathetic nerve, be stimulated, causing dilatation of the pupil, or deprived of power, so permitting contraction of the pupil.

CYSTIC TUMOUR FROM THE OCCIPITAL REGION OF A CHILD.

Mr. Ward described this preparation as occurring in a child aged twelve months. There was a tumour in the occipital region, movable, the size of a billiard-ball, but adherent to the skin. It appeared like a fatty tumour, but on putting in a grooved needle serum flowed out, without much diminishing its bulk. He removed it by an incision afterwards, and found that it contained several small cysts.

DISEASED EYE.

Mr. Price showed a specimen removed by operation.

CALCULI OF THE BLADDER.

Mr. Price also exhibited fourteen calculi removed from the bladder of a patient by lithotomy. The forms of some ofthem were peculiar.

OBSTETRICAL SOCIETY OF LONDON.

DR. RIGBY, PRESIDENT.

A CASE OF RUPTURED PERINÆUM, AND BIRTH OF THE CHILD BETWEEN THE OS VAGINÆ AND ANUS.

BY I. B. BROWN, F.R.C.S.E., ETC.

In this case the child's head rested on the perinæum, but delivery was delayed, though the pains were very violent, owing to the non-dilatation of the os vaginæ. While a friend of the attending practitioner went to fetch the forceps, the perinæum gave way between the os vaginæ and anus, and the child was expelled completely through the opening. A fortnight afterwards, Mr. Brown pared the edges of the wound, which remained unhealed, and cut through the fourchette. Iron wire sutures were introduced, and the parts all healed completely.

Several old and curious pairs of Midwifery Forceps were exhibited to the meeting by Dr. F. Charles Cory. The manner in which these instruments were applied was explained by the President.

Dr. Meadows exhibited a specimen of

CONGENITAL HERNIA (?) OF THE LIVER.

The whole of this viscus was enclosed in a pouch, to which it was firmly adherent, and which had protruded through the umbilical opening, drawing forward with it the inferior vena cava, which entered the thorax just behind the sternum. The cæcum was situated in the right hypochondrium, the colon descending thence on the right side to the pelvis, where it ended in the rectum. Portions of the stomach and small intestine were also contained in the pouch, with the liver, but there was no obstruction of the bowel. The child died one month after birth, dry gangrene having extended to the mass after the death of the umbilical cord.

ON THE MINUTE ANATOMY AND STRUCTURE OF A FIBROUS TUMOUR OF THE WOMB, EXHIBITED TO THE SOCIETY AT A PREVIOUS MEETING.

BY HENRY G. TIMES, M.R.C.S.E., ETC.

The tumour is uterine in its origin; its form is kidney-shaped; it is of the size of a child's head at birth, and weighs 10lbs. The structure consists of uterine fibres and white fibrous tissue, arranged concentrically, with abundant calcareous deposit amongst the laminæ. The pedicle is formed of uterine tissue, spreading out and embracing the sides of the tumour. The length of the uterus is six inches, and the os is occluded an inch from its orifice. By the tumour's weight in growth, the body of the uterus is separated two inches from the cervix, and all the openings into it are occluded. The Fallopian tubes are six inches long, but both alike occluded. Both ovaries are present, but lengthened to three inches into round and cord-like ligaments; the usual ovarian structure, however, is recognisable in both.

ON CERTAIN PHENOMENA, FACTS, AND CALCULATIONS INCIDENTAL TO, OR CONNECTED WITH, THE POWER AND ACT OF PROPAGATION IN FEMALES OF THE INDUSTRIAL CLASSES IN THE METROPOLIS;

DERIVED FROM AN EXPERIENCE EXTENDING TO UPWARDS OF 12,000 CASES CAREFULLY OBSERVED.

BY A. B. GRANVILLE, M.D., F.R.S., ETC.

After an appropriate introduction, in which reference was made to the establishment of the present Obstetrical Society, destined to carry out the much higher duties, which a former Obstetrical Society, through pitiful and miserable considerations, had disregarded, of promoting obstetrical knowledge in all its branches; and after contrasting the present more elevated condition of midwifery in this country with its humiliating state when he commenced his practice in the metropolis, Dr. Granville proceeded to give the result of his experience at two lying-in institutions—the Western General Dispensary and the Benevolent Institution—extending over a period of several years, during which he had acted as obstetrical physician, and had carefully recorded upwards of 12,000 cases, out of nearly 22,000 admissions, in minutely subdivided registers, to which he had invited the personal inspection of the President.

The summary of the varied information thus collected Dr. Granville had arranged in thirteen tables, two appendices, and a colored diagram, which were circulated amongst the auditors present at the meeting, whilst the memoir or report was being read by the Secretary, giving a running commentary, with facts and explanations, illustrative of the contents of the tables themselves. All these facts were preceded by the enumeration of the several means, adopted by the author during his public practice, through which a knowledge of those facts was obtained and registered. Dr. Granville dwelt with much force on the benefit which several branches of human polity would derive from tabulated and positive facts such as obstetrical reporters and obstetrical societies alone can supply; and observed that it is, indeed, difficult to conceive how questions concerning the laws which govern the reproduction and preservation of the human species, or which regard the natural duration of its existence, or the valuation of female and infant life, or the theory of population, can be discussed in the absence of such information as obstetricians alone daily and hourly witness and collect. According to M. Fourier, the eminent French mathematician, there is "in all statistical researches a general proposition to which too much attention cannot be paid,—namely, that the indefinite repetition of events, generally denominated fortuitous, does away with the degree of changeableness that may belong to them. In a series of an immense number of facts, there are none but constant and necessary relations, determined by the nature of things;" and such immense number of facts the published records of the Dublin Hospital, the Maternité of Paris, the reports of Carus, Siebold, Collins, Montgomery, Churchill, Scanzoni, &c., amply supply.

Dr. Granville then proceeded to add his own quota of such original facts, which he divided into four great sections:—1st, Ages of Pregnant Women; 2nd, Produce of Pregnancies; 3rd, Multiparous Births; 4th, Parturition. He stated at the conclusion that another great source of facts remained to be treated,—namely, abortion; without which, he maintained, all attempts at calculating and duly estimating the power of reproduction in the human species must necessarily be imperfect; but the great length to which the memoir had extended precluded the possibility of this all-important subject being treated on the present occasion, and would be reserved for another season, together with the consideration of some of the most striking cases of the diseases of females and children.

The subject of the *Ages of Pregnant Women* was very fully treated, and elicited some curious results, the principal of which is, that Englishwomen arrive at the culminating period of prolificacy at thirty years of age. The author had shown, on a former occasion, that the same culminating point in France was at twenty-eight and a half. This culminating point was strikingly shown in the colored diagram, in which were also exhibited two other facts—that just before and immediately after the period of thirty years, reproduction comparatively stood still in the first, and sank to a very low scale in the second: as if, in the former, Nature prepared herself for an immense exertion, being no less than the duplication of births; and in the latter she showed tokens of exhaustion.

Under the head of the *Produce of Pregnancies* at both charities, we have a total of 12,478 children, or 6615 boys and 5863 girls, the proportion of males to females being as 1 and 1-9th to 1, which is a somewhat higher rate than the one cited by Quetelet as the general proportion of the sexes in Europe—viz., 106 males to 100 females. Of the above number of uniparous births, 277 were of still-born children, the male sex preponderating. This proportion of still-born is a more favorable rate than is recorded in all the principal and well-known obstetrical reports. Of multiparous births, Dr. Granville recorded 136 cases of twins, and 4 cases of triplets, being a case of twins in 62 3-4 labors, and 1 case of triplets in 3154 cases. The Dublin Report gives 1 triplet case in 4652 births. Bérard and Robin assign the produce of twins in Frenchwomen as 1 in 70 or 80 deliveries, and triplets 1 in 7088 cases, being half the English rates. In 1820, at the Western General Dispensary, there had been 16 twin cases in 669 deliveries, being 1 twin case in 42 labours.

Under the head of *Parturition*, the author brings forward afresh his proposal for a much simpler classification of labours into active and passive; the latter being subdivided into manual and instrumental. He thus does away with the use of such inapt denominations as are still retained in most of the modern treatises on midwifery—namely, "natural, premature, preternatural, tedious, laborious, instrumental, impracticable, complicated, difficult, lingering, complex, unnatural"—as if anything could be in Nature unnatural. After mentioning sixteen different positions in which the child presents, besides what he calls the primitive or normal one, under each of which Dr. Granville gives the proportion as compared to the total number of labours; and after having dwelt on the comparative frequency of certain positions to that of others, he proceeds in Tables XI. and XII. to show the number of passive labours that had taken place under his direction in 12,478 deliveries, distinguishing the manual from the instrumental, and giving the results as to the children born. In the 267 cases of abnormal presentation, the proportion of still-born children after passive labour was 1 in 304. And another fact is elicited from the two tables in question—viz, that the manual and instrumental labours were nearly equal. Under the head of mortality of the mother the proportion of 1 in 500 is recorded. Some important remarks were made on the use of the forceps, Dr. Granville advocating its early employment in labour to prevent craniotomy, the proportion of which operation by-the-bye, in his experience, amounted only to 9 in 267 cases of abnormal presentation, or 1 in 1380 labours. The proportion of forceps cases has been 1 in 621 of all the labours. Dr. Granville invariably used a somewhat larger form of Assalini's forceps. The general result of his practice gives a proportion of passive to active labours as 1 in 103 and 9-10ths; of hand labours as 1 in 218, and of instrumental labours as 1 in 270.

The subjects of placenta prævia, convulsions, hæmorrhage, syncope, deformities caused by the imagination of the mother, and a case of locked-jaw in parturition, were referred to, with their respective frequency, and the manner of their termination. The author concluded with the promise of a second communication for next season, should he be spared another year.

Dr. Tyler Smith observed that when a gentleman of Dr. Granville's age and experience came before the Society with an elaborate paper, it was only due to him that he should be treated with great respect. But still a few critical remarks ought to be made to prevent errors being perpetuated. Now, although Dr. Granville's practice was doubtless good in its day, it was hardly up to the mark of the present time. For instance, the forceps had only been applied once in every 600 cases; but no one could now safely conduct a large midwifery practice without recourse to this instrument much more frequently than these figures indicated. With regard to children born with deficient limbs, it was now allowed by all physiologists that they could be explained without having recourse to a belief in the power of the mother's imagination. The case mentioned by Dr. Granville was not an example of arrested development, but simply an instance of intra-uterine amputation. Dr. Montgomery had admirably explained the mode in which this occurred. It is also well known that the fœtus in utero may imbibe from the mother the contagion of small-pox; but it could not be supposed that this disease was due to the mind of the mother acting upon the unborn child.

Dr. Murphy asked for an explanation of one or two points, especially as to the earliest and latest periods of life at which the author had known pregnancy to occur. He also remarked that it seemed to him very difficult altogether to ignore the influence of the mother's imagination in producing certain deformities of the fœtus.

Dr. Tanner said that he would only make two observations on the paper which had been read. First, with regard to the influence of the mother's imagination or fears in producing the deformity of the fœtus. On this head he would remind the fellows that Dr. William Hunter took some pains to investigate the subject at the Lying-in-Hospital to which he was attached as physician, and with this result—namely, that in 2000 cases there did not occur a single instance in which there was any coincidence between the right, or accident, or longings of the mother and the deformity of the child. Dr. Tanner had himself met with an instance where the evidence in favor of some connexion between a fright and the deformity appeared to be strong, until the case was examined into; when it was found that a normally developed gland had been mistaken for disease. The second point was as to the propriety, in breech presentations, of adopting Dr. Granville's practice in using the blunt hook to pull down the legs. Dr. Tanner considered such a proceeding would often be fatal to the infant. He always endeavored, on the contrary, to keep the legs up rather than to pull them down, so that the umbilical cord might not be unduly compressed.

Dr. Druitt wished to make only one remark. The question as to the influence of the maternal imagination in producing deformity of the child ought to be looked at from every point of view. Now, how did the advocates of this theory explain the malformations of chickens, &c.? Surely no fright to the hen while sitting could affect the chick in the egg.

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HARVEIAN SOCIETY.

Dr. Browning read a paper on

YELLOW FEVER.

After some introductory remarks upon epidemic diseases generally, that which formed the subject of the present paper was introduced by referring to the localities in the West Indies, in other parts of North America, in South America, and in Europe, where yellow fever prevails. Low and level districts in Mexico and in the southern portion of the United States, were stated to present all the natural and geographical advantages necessary for the origin and spread of this disease. The more elevated parts of the West India islands are exempt. Thus some towns in Jamaica, at an elevation of 2000 feet, are healthy, as well as the higher parts of St. Domingo; whilst an elevation of more than 3000 feet has been assigned for the required exemption in Mexico. The Pacific coast has been rarely invaded, and on these occasions Panama and Callao have been its chosen towns. It was assumed that yellow fever was the same in its pathology in whatever country it might appear, whether sporadically or epidemically; that it had geograpical limits beyond which it did not appear, and that long-continued heat and drought were atmospheric conditions favorable to the origin and spread of it. The constitutional condition induced by previous residence in high latitudes largely increases the per-centage of mortality. The percentage of mortality is much greater amongst those who have acquired a vigorous constitutional condition by previous residence in high latitudes, upon entering what has been termed the "yellow fever zone," than upon those who have long been accustomed to the enervating influence of high temperature and the scorching rays of the unobscured sun. Intemperance and exposure might be regarded as predisposing causes; but total abstinence from spirituous drinks had been found no protection. The period of incubation and the mode of invasion were then stated by Dr. Browning to be subject to very considerable variation, some systems throwing off the secret agency which is at work for a long time, whilst others quickly succumb to its influence. The onset occurs most frequently in the early hours of the night, and those of the morning. Sometimes the mode of attack is remarkable for its abruptness; whilst in the generality of cases, the fever is ushered in by a chill and shivering, to be quickly followed by severe pain in the head and muscles of the back and thighs.

The division of the fever was that adopted by Dr. La Roche, of Philadelphia, into three stages: 1st, that of reaction; 2nd, that of calm remission; 3rd, that of exhaustion. A single paroxysm, usually lasting only a few hours, was dwelt upon as one of the peculiar features of the disease—the yellow or orange color of the skin a sign of its intensity. The lowness of the pulse sometimes throughout an attack has been attributed to the poison acting as a sedative upon the heart's action. The great tendency to hæmorrhage (a tendency which is also frequently exhibited after death) was regarded as another distinguishing mark of yellow fever; and black vomit a greatly dreaded, but not necessarily fatal, symptom. The per-centage of mortality consequent upon a severe epidemic was stated to be enormous, being slightly in favor of a tropical over a European climate; and greatest, as a matter of course, in those cases accompanied by black vomit. In the severe epidemic of 1853, in New Orleans, the house-surgeon of the Charity Hospital stated that seven per cent. of those who had black vomit recovered in that institution—a larger estimate, perhaps, than is usually made.

The author then concisely referred to the treatment by saying it would naturally occur to everyone, that in a disease of this character various modes of treatment should have been adopted, some, perhaps, having been introduced by caprice, and sustained for a time by fashion. The Rhenish wines and champagne, in the latter stages, were regarded as grateful and valuable stimulants. Enormous depletion had had its advocates, and in the absence of all depletion fancied safety had been sought; whilst others again, upon more rational grounds, had found efficacy in the moderate abstraction of blood by cups or leeches in a certain class of cases. The excessive and often repeated doses of quinine and calomel, as recommended by the late Dr. Blair, were condemned under the conviction that these (in doses of twenty or more grains of each, to be repeated two or three times at intervals of six hours, as occasion might require) had not been attended with such beneficial results as were once accorded to them; smaller doses better fulfilled the indications, without the grave results which frequently attend the so-called *heroic* practice. The sedative effect of frequent sponging with cold water or lemon-juice, allays irritability and tranquilizes vascular action; sometimes tepid sponging better answers the requirements of the case.

Many of the peculiarities which belong to yellow fever having been pointed out as concisely as possible, the opinion was pointedly expressed that its mode of invasion, its assigned geographical limits, its single paroxysm, with many other characteristics, claim for it a distinctive character, and establish it as a disease *sui generis*.

WESTERN MEDICAL & SURGICAL SOCIETY.

Dr. Wm. Ogle read a paper on

WHAT TO OBSERVE IN DIPHTHERIA.

The paper consisted of a typical case, drawn up from analysis of records which have been already published, and of other cases that have recently occurred in the south-west district of London.

Dr. Ogle maintained that in the study of an epidemic such as diphtheria, observation should be extended so as to embrace other cases than those which are allowed to be genuine cases of the disease in question. In the present instance he recommended that all throat affections should be noted, all cases in which there is any tendency shown to croupal complication, and all recent cases of albuminuria. By a a process of analysis and comparison of these cases with each other, and with others of the same disease which have been observed when no such epidemic was prevalent, the characteristic symptoms of diphtheria would be learnt, and thus an answer obtained to the question, "What to observe in diphtheria." In order to facilitate such comparison, it is desirable that all practitioners should draw up their cases after some generally approved plan, and that they should be careful to state facts rather than opinions. Thus "pulse 120" is a fact, whereas "pulse quick" is only an opinion, and is obviously of comparatively little value. It is not necessary to have as a basis any more complicated plan than that which is naturally followed under all circumstances, and by everyone. Symptoms being the conditions of the several parts of the body, and these parts being the same in all cases, a general outline—the same for all—is found more or less distinctly in every record. Every clinical record consists of facts that refer primarily either to the cutaneous, nervous, respiratory, circulatory, alimentary, urinary, or generative systems. These, with a single division for the facts that cannot be so arranged under any of the foregoing, suffice for all practical purposes.

Dr. Ogle exhibited an ingenious method, by which any person, remembering this natural division of the symptoms, could so order his manuscripts that the different symptoms might be read off, thus saving the trouble of making a separate analysis of each case, at the same time preserving the continuity of the record without loss of space. In the application of this plan to an epidemic, or to any special group of cases, modifications, according to the experience and judgment of the individual observer, would arise; but the simple, general outline being preserved, there would be a uniformity in the records, which is so much to be desired in clinical medicine.

We have given a report of this, which formed the introduction to the paper, both because it seems to us to supply a want that is universally felt, and also because the paper itself being of the nature of an abstract, it is impossible by further condensation to bring it within the limits at our disposal.

Editorial.

THE COLLEGE OF PHYSICIANS AND GENERAL PRACTITIONERS.

The opening of the College of Physicians for the reception of the General Practitioners of England will constitute an epoch in the history of that institution and of the profession. The position which the ancient Charter of the College conferred upon it as the natural head and governing power over the practice of Medicine in its most extended sense—a position which even in the last century it occupied, and which it abdicated in 1815—is now happily resumed.' The idea that the College was a College of Physicians pure and simple, and that it had nothing to do with those who practiced Medicine otherwise than according to the Bye-laws of the Corporation, is at last exploded. Forty-five years of progress in science, and thirty-six years of free journalism, have wrought a change in the minds of men. The belief that the educational examining and licensing powers in Medicine could be entrusted with advantage and credit to a trading company, howsoever honest the intentions of the company might be, is now recognised to be a baneful delusion. Notwithstanding the gradual advance in the curriculum of study, and the increased severity of the examinations instituted by the Apothecaries' Society, it has been felt that no efforts, however laudable, could possibly confer dignity upon a diploma issued by a company of druggists. The fundamental error of mis-association could not be corrected by the most judicious administration. Hence, although it has been the fashion to extol the Blackfriars' examination as extensive and searching, nothing could make it respected. The first emotion of satisfaction of the young apothecary at having passed is quickly followed by the desire to conceal a title which he is conscious will bring him no honor. The diploma is valued, like any mercantile commodity, at what it will bring. It forms one-half of the qualification exacted for certain public appointments; it empowers the holder to dispense medicines and to recover charges. Excepting on occasions when these properties of the diploma are called into action, the document and title are usually preserved in discreet obscurity. To accomplish this the more effectually, the licentiate of Blackfriars commonly resorts to the expedient of covering his Apothecaries' diploma with another. The pliant parchment of a Northern College, or of some European or Transatlantic University, is slipped over the Blackfriars' licence the moment the latter has served its purpose before Boards of Guardians and County Courts.

Herein is the proof of the failure of the Apothecaries Act. The Society confers the only legal medical qualification in England. The possession of this qualification is, in the majority of instances indispensable. Yet so little is it esteemed, that the English general practitioner is compelled to seek a supplementary and merely honorary title elsewhere. This circumstance is the one sufficient condemnation of the existing order of things. Surely the metropolis of Great Britain ought to confer a diploma and a title honorable enough to render the possession of any other superfluous. This is the case as seen from the general practitioner's point of view. But the concession made by the College involves no detriment to that corporation, and no injury to the order of physicians. True the College will exist, for the future, not for physicians alone, but for the body of the medical profession. But it will assume its legitimate position as the head of Medicine in this country. Instead of the medical teachers and hospital physicians of England receiving curricula from a Company of Apothecaries, the schools will receive their inspiration from the College of Physicians. This change alone will have the happiest effects. Teachers are we believe, practically, if not expressly, excluded from the Examining Board of Apothecaries' Hall.

Yet who so fitted to direct education as those who teach? And, again, who so fitted to examine and license as those who teach? By recovering these functions, the College will have the opportunity of improving and consolidating the scheme of education and the examinations in medicine. According all due credit to the exertions of the Apothecaries' Company in this matter, it cannot be doubted that there is room for great improvement. Substantial improvement, effected under the auspices of the College of Physicians, would entail the further advantage of increased confidence and respect on the part of the public and the profession. Surely the most exclusive Fellows must admit that functions so important and a position so conspicuous will add to the dignity and increase the *prestige* of the College. And is it possible to maintain that what enhances the dignity and *prestige* of the College can detract from the position of its Members?

Having decided upon the course of admitting the general practitioners into the College, the task of giving effect to their resolution will, no doubt, be entered upon with vigor. The mode of doing this will, of course, give occasion to further discussion in the College and out of doors, and to this fertile subject we shall hereafter return.

In every way the projected association of the general practitioners with the College of Physicians is one upon which we may cordially congratulate all parties. The Licentiate of the Hall now becomes the Licentiate of the College of Pysicians. Medicine, released from her degrading connexion with a trading company, will resume her place by the side of Surgery. The profession in all its ranks will be elevated in its relations with the public, and the community itself will receive a corresponding benefit.

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THE UNIVERSITY OF LONDON: ADDRESS OF EARL GRANVILLE.

The address of Earl Granville at the annual gathering of the University of London is justly regarded by the literary and scientific world as one of the most interesting events of the season. The Chancellor, on these occasions, not only passes in lucid review the history and progress of the University during the past year, but he also never fails to throw the warm light of a generous mind and cultivated intellect over the subjects of his discourse. The recipient of degrees and honors feels a prouder glow at his early success, and a firmer resolve for future exertion, when he hears those cheering and suggestive words with which the head of the University greets him on his admission into the academical body. That brilliant assembly, drawn together to grace the occasion; the imposing array of professors, examiners, and senators; the lively crowd of students, joyous at the present success of their fellows, and hopeful of their own; the pleased and eager visitors; the very walls, from which look down the portraits of the departed glories of literature and science, whom imagination may invest with an approving smile for that work which continues, fructifies, and diffuses the knowledge of olden times—constitute a scene that even maturity and old age behold with gratification, and that will dwell as a happy memory in the minds of the youthful graduates, encouraging and sustaining them in their future career.

Admission into the University of London has now become a privilege to be coveted, not alone for the literary and scientific distinction obtained, but also for the important social and political advantages acquired. Graduates now form an integral and active part of the University. As members of Convocation, they nominate persons to be chosen for seats in the Senate, and enjoy other advantages which give them a considerable influence over the government of the University. And whenever a Reform Bill shall pass, a clause—the only one, perhaps, that has escaped animadversion—will confer on them the high privilege of sending a representative to the House of Commons. These powers invest the degree with far more than a scholastic or professional dignity; they impose a serious national duty. In adverting to this subject, Earl Granville rightly expressed a hope that the choice of his hearers would be uninfluenced by party spirit, and that they would send to the House of Commons a man who would not only represent local interests, but uphold the cause of literature and science.

The Metropolitan University includes men belonging to every party, and to the extremes of every party. This circumstance, if discretion and good feeling govern, is an element of strength. But if any section, disregarding the general interest, attempt to break through the one common bond of a literary and scientific community, then will discord prevail, and the *prestige* of the University suffer irreparable damage. In the contest for Parliamentary representation, one thing should ever be present to the mind. No one section has a right to seek to identify the University with itself; nothing but the blindest rancor of party can lead one set of men to strive to make the University of all lend its moral weight in the Legislature to prop up the political or religious views of the few. To repeat the warning words of Lord Granville, let us again say that the two things a University has to represent are literature and science.

To turn to other topics, we observe with satisfaction that that most wise and liberal provision in the new Charter which the Senate carried with the support of but a small band of graduates—the admission of candidates who are not connected with affiliated Colleges—is working well for the University, and well for the cause of free education. Of eighty-one persons who presented themselves for the degree of B.A., thirty were non-collegiate men; and a large proportion of these were admitted to the honors of the first class.

The spreading fame of the institution is further manifested by the call throughout the country for provincial examinations. Five examinations, conducted by sub-examiners deputed from London, have been held at various places; and there are applications for four examinations this year.

Perhaps the most striking compliment to the reputation of the University is the rumor cited by the Chancellor that a great desire prevails in Scotland to obtain London degrees. This is solid testimony, coming as it does from a highly-educated land, where Universities are not scarce, and sagacity not deficient.

Turning his attention to the Medical Faculty, the Chancellor dwelt with marked earnestness and feeling upon the high place which Medicine was entitled to assume amongst the learned professions. We do not think that the questions now agitated as to the general education to be required as a condition for entering the profession could be more strikingly illustrated or more fitly introduced. They all knew, he said, how noble was the medical profession; in hours of peace, how instructive and agreeable was the conversation of a medical man; and in hours of sorrow, how consoling the conversation of a cultivated mind. It was therefore of the utmost importance that the medical man should be a person of good general education. When he considered what industry, intelligence, perseverance, and logical power was necessary to qualify a man for this profession, he was disposed to place it above that of the Law. In accordance with this view, the Senate has prepared a more severe and perfect curriculum. All candidates now pass through the matriculation examination. The special practical tests have been improved by the extension of clinical examinations: the candidate is taken to the hospitals, and his powers of detecting disease and treating it are tried exactly in that manner in which he will be called on to exercise them when he enters upon the responsibilities of practice.

Another feature which has marked the progress of the University is the appointment of double Examiners. In every subject alike in Arts, Law, Science, and Medicine, two Examiners are appointed. This not only secures the candidate against the possible hobbyism of one Examiner, but it is certain to improve the standard of the examination. The concurrence of two minds, of diverse range and experience, will open a larger and more liberal field of subjects, and check more than anything else can the tendency to "cram." The Chancellor expressed his gratification, that by this arrangement no less than nine graduates had found places on the staff of Examiners.

No examination has yet been held for the new degrees in Sciences. But the scheme has been elaborated; Examiners have been appointed; and this new road to distinction, this new incentive to the cultivation of useful knowledge, is fairly open. We cannot doubt that men who propose to devote themselves to the practical pursuit of Chemistry, Physics, Architecture, Engineering, and Biology, will think it an object worthy of their ambition to enter a University, whose degrees in other professions hold so distinguished a rank in public esteem.

We hope to see the University speedily enlarged by a fair accession of men representing this new department in the commonwealth of knowledge; and in hopeful anticipation of this, and yet fresh marks of vigorous progress, extended usefulness, and increasing honor, we look forward to the next address of the noble and accomplished Chancellor.

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INTEMPERANCE IN INDIA.

THE majority of our military and medical officers will acknowledge that *intemperance* is one of the chief determining causes of the high rate of mortality which is common amongst the troops at each of the three Presidencies of India. Those who are best able to judge of the matter have formed the same strong conviction as Colonel Sykes has—namely, that the mortality amongst the European troops will not be lessened until the soldier is improved in his habits—until he is made to understand that temperance is for the benefit of his body, libraries for the benefit of his mind, and exercise for the benefit of his health. Yet strange to say, one or two authorities can be referred to who attempt to show that the popular notion relative to the way in which habits of intemperance influence the rate of army mortality is an erroneous one. Sir A. Tulloch, for example, is a strong advocate of the opinion that drunkenness does not form one of the main causes of sickness and mortality amongst her Majesty's troops. If it be said that this opinion does not relate to the Indian army, we may observe that, in reference to the latter, Dr. Balfour maintains that the actual loss which the service sustains by the intemperance of its soldiers adds only a small proportion to the deaths from climatorial diseases. This officer likewise maintains that the belief that soldiers are generally intemperate is a very unjust one.

Now, with every respect for these latter authorities, we must agree with Dr. Chevers that "all our data combine to support an opposite line of argument." The reports from nearly all the medical officers in Madras concur in stating that "the chief cause of crime and mortality is drunkenness." It is the same as regards Bengal; and upon looking at the data afforded by an article in the *Bengal Review*, entitled "Soldiers, their Mortality and Morality," we observe a body of 8743 men, of whom 1467, or 167 in the 1000, are drunkards! We have long been satisfied of the enormity of the evil of allowing, if not of seducing, soldiers to drink large quantities of raw spirits in India. We commented upon the degradation of our men in the East from constant intoxication when lately bringing the facts of the *Great Tasmania* case before our readers. We there exhibited the European troops collected at the military depôt for Calcutta where the canteen is the property of a sergeant-major. We found them under this worthy's care until they embarked; and we discovered the natural consequences attending such an arrangement—namely, that the sergeant induced the men to drink as much as possible, and that they did drink to such an extent as often to prevent them going on parade. Dr. Fernandez, the medical superintendent of these men on their voyage home, informs us that the kind of liquor they drank while in India was made so strong that it was like fire in the mouth. It was called "bayonet-points," "fire-dragon," and other strange and potent names.

We have been somewhat struck by an account* we have just received from India of a very sudden and remarkable mortality amongst the men of the K Battery, Royal Artillery, at Baroda. This occurred at first sight apparently from no very assignable cause, though all the men had head-symptoms of "sun-stroke" character, and ten died, between May 27th and June 2d, in the course of a few hours. It is also a striking fact, than this mortality took place whilst a detachment of her Majesty's 4th (King's Own) Regiment, at the same station, lost only one man. In the Artillery, however, as the strongest and finest-looking men were the first to suffer, the alarm increased, and the men generally of the company lost heart so as to lead them to "fancy themselves struck when, in reality, nothing ailed them." Under these circumstances, the medical officers of the brigade advised the brigadier commanding to march the company out for a change, believing that although in tents the thermometer might stand higher than in barracks, yet to the soldiers' sensations it would appear cooler. Further, their thoughts being diverted by change of scene, the men might recover a healthy tone of mind, and their bodily health along with it. This judicious advice of the medical officers was happily listened to by a sensible commandant, and the company (with the exception of a few men left to look after the battery and horses) was marched out some twenty miles to Dutka, on the banks of the Myhe, within influence of the sea-breeze, and where the men could find amusement. Improvement rapidly ensued, and in less than a fortnight the company returned to Baroda, with fewer sick than it had had for some time previously.

What was the cause of this strange and sudden mortality in one body of men, whilst another (two companies of the 4th Foot), quartered in barracks of the same construction, and immediately adjoining those of the other corps, lost only one man by "coup-de-soleil," and were as healthy as could be expected, having only twenty sick (one serious case) out of 171 men? The following extract from an official paper will show:—

> "A medical committee was ordered to report upon the extraordinary sickness in No. 1 Battery, 13th Battalion, Royal Artillery, and to assign, if possible, reasons for the mortality that took place in its ranks, whilst the detachment of the 4th (King's Own) Regiment, quartered in barracks immediately adjoining, and living under precisely similar conditions, exhibited an average amount of sickness.
>
> "The committee, after careful investigation of all the circumstances, arrived at the conclusion that the mortality amongst the men of the Royal Artillery was caused by the exposure of men of *intemperate* habits to the heat and sun; and that the comparative immunity of the detachment of the 4th Royal Regiment arose from their more abstemious habits, and less exposure. No cause for the mortality amongst the men of the Artillery could be traced to the barrack accommodation, as those who died came equally from the old and the new barracks, the rooms of which are as near as possible like those occupied by the detachment of the 4th (King's Own); nor could any cause be traced in diet, as the rations received were very good, and could not in any way have proved injurious to the health of the men, and were similar for the Artillery and for the 4th (King's Own.")

That *intemperance* was at the bottom of this sudden mortality, there can be no doubt. The surgeon carefully examined the canteen reports, and found the quantity of spirits that had been daily consumed to be very great. The men were known as "free drinkers," or as "hard drinkers," and when there were fewer men to drink the usual ration, the consumption of arrack was at its greatest height; the men, when the nervous depression first seized them, having immediate recourse to "spirits" as a relief. The temperate men of the battery were those who did not suffer. The means further adopted at the time to prevent a recurrence of the danger were, the closure of the canteen, with the exception of the issue of one pint of porter per man daily, and the suspension of extra drills and parades.

Now, surely some way between "teetotalism" and intemperance might be found worthy of Government patronage for the adoption of soldiers in India. Government commenced a good work; but it is clear that, for the burning sky and deleterious climate of the East, it ought to have gone further. The discontinuance of the allowance of the "rum ration," (except on field service,) and the providing of malt liquor for the men, have tended to diminish to some extent drunkenness in the army. Formerly every soldier in India and in our other tropical colonies received a daily allowance of half a pint of rum, in the form of "two drams," as they were called. The existing system, as we learn from Dr. Chevers, (*op. cit.*,) limits the quantity of liquor obtainable by each man only on *desire* to a quart of beer and two "drams" of spirits. But the majority of experienced medical men in India certainly hold the opinion that it is advisable to discontinue altogether the *authorized* sale of spiritous liquors to our troops. In former times, when the men's balances were paid monthly, and any amount of rum was procurable for some time after pay day, commanding officers were obliged to dispense with parades sometimes for several days successively; it was with difficulty that the requisite number of men could be found sufficiently sober to mount guard, at least so Mr. Marshall tells us. So much for "bayonet points," fire-dragon," and "hell's blazes"—the last a delightful mixture of arrack, fermenting toddy, and cayenne pepper, and which at some stations used formerly to be of so potent a character as occasionally to cause the mouth of the man who drank it to look as if its lining membrane had been removed by an escharotic.

J. RANALD MARTIN.

We learn with pleasure that the Queen has been graciously pleased to give orders for the appointment of Mr. James Ranald Martin, Examining Physician to her Majesty's Principal Secretary of State for India in Council, to be an Ordinary Member of the Civil Division of the Third Class, or Companion, of the Most Honorable Order of the Bath. Her Majesty has also accompanied the Companionship of the Bath with an offer of knighthood, which will probably be conferred on our distinguished professional brother at the next meeting of the Order.

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* Transactions of the Medical and Physical Society of Bombay. No. V., New Series. Bombay, 1860.

Medical Annotations.

DURING HER MAJESTY'S PLEASURE.

What is her Majesty's pleasure as to criminal lunatics? This is a question which probably many people have asked themselves with that vague kind of wonder which melts into a general and indefinite belief that, no doubt, it is all right and reasonable enough. It is, however, a question for which we are particularly interested in obtaining a satisfactory solution now that legislation impends. An excellent little pamphlet, recently published by Dr. Hood, furnishes the materials for an answer. Some of those who are thus sentenced to indefinite detention are guilty of slight offences, while others have committed the gravest crimes—even murder. But the verdict of insanity carries with it the sentence of prolonged imprisonment, whatever be the offence of the defendant. Hence lately, in the case of a certain Thomas Johnson, charged before Baron Martin with an offence punishable by one month's imprisonment, but who pleaded insanity, only the humane interposition of the judge prevented a sentence which might probably have led to imprisonment for life, by suggesting the withdrawal of the plea of insanity.

In these cases not only is justice violated by a cruel and exaggerated punishment, but the State is charged unnecessarily with the support for life of one who should contribute his share to the resources rather than to the burthens of the country. Dr. Hood suggests as a remedy, that whenever insanity is set up as a defence, the trial of the prisoner for the offence of which he is charged should be postponed, at whatever stage it may have arrived, until the state of the patient's mind be ascertained before an ordinary jury, whose verdict of insanity shall be recorded by the Court as an answer to the previous indictment. These cases are at present tried hurriedly before juries assembled for trifling criminal causes, and often disposed of without any previous notice of the intended defence being given to the prosecutor. Even if such verdicts be correctly given, another evil often follows in the existing state of things. A villain of the worst character, being acquitted on the score of insanity, and ordered for confinement in a lunatic asylum, recovers from his mental aberration, and remains all his life a vicious and violent inmate of a medical institution, where none of the arrangements are calculated to punish his crime or to subdue his propensities, and is a constant source of anxiety to those who have charge of him. It is surely desirable that power should be given for duly trying after recovery prisoners found insane upon arraignment. These considerations should be urged in the subsequent settlement of the Law of Lunacy.

THE NEW ORDER OF DENTISTS.

Finis coronat opus. The new organization of the dental profession is now fully established. The London School of Dental Surgery has been opened in Soho square. At this institution no attempt will be made to teach other branches than those which pertain specially to dentistry; and the school has been organized in connexion with the Dental Hospital of London, in order that practical instruction on subjects specially pertaining to dental surgery may be accompanied by systematic teaching, under the conditions enjoined in the curriculum issued by the College of Surgeons. The courses will be delivered by three eminent dentists—Mr. G. A. Ibbetson, F.R.C.S., F.G.S.; Mr. Samuel Cartwright, jun., F.R.C.S.; and Mr. Robert Hepburn. A course on "Metallurgy in its Dental Relations" will be delivered by Mr. G. H. Makins, M.R.C.S., F.C.S. The regulations recently issued by the College of Surgeons, relating to the professional education of candidates for examination in Dental Surgery, require that the candidate be twenty-one years of age, and have studied four years, during which he must have attended two courses of Anatomy, and one of Physiology, Surgery, Medicine, Chemistry, Materia Medica, and Chemical Manipulation, with nine months of Dissection; two winter sessions of Practice of Surgery and Clinical Surgery; special dental courses, such as those of the London School of Dentistry; three years of practical application to Mechanical Dentistry, and two years of Dental Practice at a general hospital or a recognised dental hospital, such as that attached to the above school. Thus the system of education for respectable dental practitioners will henceforth be uniform and sufficient. This curriculum implies four years' application to study, certainly not too prolonged a period for initiation into any profession. The status of those who comply with the regulations will be clear and defined; they will have fairly and fully vindicated their social and professional dignity, and will take the honorable rank which belongs to their profession when followed with dignity and propriety. Their privileges will in no way trench upon those of the members of the College of Surgeons, with whom they cannot, and need not in any case, desire to be confounded. There have been bitter heartburnings and unseemly strife about this matter, stirred up by those who preferred to value themselves by their own standard, and were anxious to prevent the promulgation of any uniform and severe test. But the advantage of collegiate tests for professional capacity does not need defence. It is still open to those who shrink from their application to adopt any independent system of their own. This will be judged at whatever its true value may be. There can be little doubt that in the end all respectable dentists will apply for the recognition of the College of Surgeons.

PUBLIC EXAMINATIONS AT PALL-MALL.

The College of Physicians of London is busily employed in arranging the details of the new examination, which will be held for the admission of candidates for the licence with privilege to dispense medicines. Of course this examination will be modelled after the approved fashion adopted now by the Universities and Colleges, combining *vivâ voce* with written examination. There is an important question, however, connected with *vivâ voce* examinations by collegiate bodies, which may well be discussed at this moment. At the elder Universities, and also in Paris, such examinations are held in the theatres of the schools, and in the presence of graduates and undergraduates. These public examinations have never been found to be alloyed with any inconvenience attributable to their publicity. That circumstance has always been an agreeable and harmless incident of the scene. It is free from objection. On the other hand, it offers many considerable advantages both to the College and to the candidates. The charges of unfairness, of incivility, of error, and of partiality, to which the Examiners of the College of Physicians have been subjected, would cease. Public attendance confers an authentic character on *vivâ voce* examinations, such as would well consort with the dignity of the College; and since it is recommended by the precedent custom of yet more venerabl seats of learning, the proposition is not be regarded as an academic innovation. The candidates would certainly find themselves benefited by a regulation which would admit a jury to the side of the judge—a jury, it is true, without vote, without power, but by no means without influence. They would then feel secure from insolence, from coarseness, from injustice, or impertinence. The individual peculiarities of the Examiners are softened by the consciousness of the public gaze. But there is no condition more favorable to the development of all the asperities of official character than the habitual enjoyment of the privilege of privately torturing victims whose destiny may be compromised by impatience, and who are bound to long-suffering, if not to servility, by the most pressing considerations of after consequences. Under such circumstances, private malice is secure in the exercise of its vengeance. Even if we suppose that the Examiners of the College remain always free from such influences, which we are very willing to assume, still we should seek to rob the torture chamber of its secrecy, and to deprive the overbearing, the pompous, or the impertinent of the opportunity of gratifying their favorite tendencies unchecked by public opinion. It is manifestly to the interest of the College of Physicians to render the new examination at once as efficient and as popular as possible. The measure of holding publicly the *vivâ voce* examinations would greatly conduce to both of these results.

ANNUITANTS OF THE NAVAL MEDICAL FUND.

The report which we lately published, recommending the abolition of the Naval Medical Supplemental Fund, now engages a considerable share of the attention of the medical officers of the Navy. It is particularly felt that this step strongly affects the interests of the two hundred widows—annuitants of the Society—whose incomes have been reduced by one-third during the last fifteen years, but who had the hope of a reversion to the annuity of £40 insured for them by their husbands. The reduction was affected by Act of Parliament, and would extend over nine years. Those personally interested felt that it would not be equitable to treat this as a reduction for a life time, and that their claims would not be satisfied by life annuities at the present rate of £26 13s. 4d.; but, rather, ask for annuities of this amount over the next ten years to increase to £40 for the survivors. In order to wind-up the Society, as the report suggests, an Act of Parliament will be necessary, and the opposition of the two hundred widows would not facilitate legislation. We recommend their case to the prior consideration of the committee of inquiry.

PLAY AND PRISON.

The public has been naturally and grievously shocked by the statement that some scores of children are annually committed to prison for playing in the public streets. Hundreds are charged before the metropolitan magistrates with this offence. Imprisonment would seem to be an unnatural sentence, weighing cruelly upon an inborn necessity of childish development. Yet it may be admitted that the consequences of boyish games pursued in public thoroughfares are often so serious and always so inconvenient, that public repression is called for. It is impossible to ignore the mischief of prohibiting children from recreation in the open air; but it were wrong to encourage them in amusements dangerous to the life and limb of passers-by: such are "tip-cat, marbles, rounders," and the like childish games. It remains to use all possible exertion to provide them with places of public, open-air recreation. Above all, it is right that we should be jealous of any encroachment upon the few yards of open space which are still left here and there in the heart of the metropolis. We cordially echo the protest of Lord Ebury and Lord Shaftesbury uttered in the House of Lords recently against the compromise between the Government and the Corporation of the City by which it is proposed to build over a great part of Smithfield. Forty boys of tender age were committed to Westminster Bridewell last year for attempting to play in the streets; and the paternal Government which consigned these young culprits to the tender mercies of the jailer, at the same time proceed to close up the only piece of open ground available to a dense and unhealthy population of thousands. Near the site are St. Bartholomew's Hospital, Christ's Hospital (with its 1000 boys), and the two great prisons. It is surrounded by thousands of children of the poor, to whom no other exercising ground is contiguous. We hope that the indignant protest of Lords Ebury and Shaftesbury may be of some avail for its preservation.

NATURAL SCIENCE AT COURT.

All the world knows that Professor Owen is now delivering a series of lectures on Natural History at Buckingham Palace, before her Majesty and the little people there. This event is not in itself very remarkable, since it is the privilege of greatness to adorn itself with the most recent triumphs of science, and to gather the latest news of natural discovery, no less than to profit by the highest developments of human power and skill in all other departments of labor. It is rarely that so distinguished a naturalist will confine his prelections to an audience so limited; but, on the other hand, it is yet more rare that he should find willing and appreciative listeners of so distinguished a rank, and whose impregnation with a love of natural science may so favorably influence the progress of the science in this country. It is this consideration which gives to these lectures something more than a private importance. Physiologists and naturalists have long and not very successfully denounced the insufficient system of education adopted in all our public and private schools and in the universities—a system which makes the teaching of words and forms of speech a finality, and which ignores to an absurd degree all teaching of facts. The most highly educated of our university students, and the most common-place lad leaving a middle-class school, enter upon life with more or less knowledge of French and Latin composition, and of algebraic and mathematical science, but wholly ignorant of the names of the thousand objects of Nature which surround him, unversed in the laws by which he lives and breathes, and unacquainted with any detail of the structure of his own frame or of that of any living creature. He falls an easy prey to vicious pleasures because he has no power to derive amusement from the myriads of natural objects which surround him. They are beautified for his inspection, but his instructors leave him to regard them with the vacant stare of untaught dulness. He becomes the early victim of every kind of charlatan, because no man can talk to him nonsense so gross but that his ignorance will swallow the fabrication. Probably fashion and example may now lend valuable aid to reason and argument in enforcing the teaching of natural science in schools and families, in a manner which will at once inform and discipline the mind.

A Case of Glanders in a Man.—M. Reynier has given an account of the above case, which relates to a man aged thirty-one, who had taken care of a glandered horse. The principal symptoms were abscesses about each hand alternately, a large pustule with livid areola over the right eye, profuse suppuration, typhoid symptoms, and death on the twenty-fifth day after the attack. No autopsy was allowed.

Reviews and Notices of Books.

On Obscure Diseases of the Brain and Disorders of the Mind: their Pathology, Diagnosis, Treatment, and Prophylaxis. By Forbes Winslow, M.D., D.C.L. Oxon., &c. pp. 721. London: Churchill.

From the list of works which in late years have marked the progress of investigation on almost every subject coming within the province of medicine, a book of authority on the disorders of the mind and diseases of the brain appears to have been omitted. Since the writings of Haslam, Prichard, Morrison, Conolly, Bucknill and Tuke, no volume specially devoted to the consideration of the whole subject of insanity has issued from the British press. Notwithstanding the sad fact that cerebral and mental diseases have of late years fearfully increased amongst all classes, no work on their diagnosis and treatment exists which, in the present advanced state of knowledge, can be properly considered as a text-book on the entire subject, for the use of students and medical practitioners. Abercrombie's admirable volume on the "Diseases of the Brain," published in 1829, is the last and best of the distinct treatises which have appeared. Mental and cerebral affections have found exposition in short discursive *brochures* from many writers. Sir Charles Bell's and Dr. Marshall Hall's brilliant writings, Dr. Carpenter's investigation of the "Correlations of Physiology and Psychology," Sir Henry Holland's "Chapters on Mental Philosophy," Mr Solly's work on the "Anatomy and Physiology of the Brain," Dr. Brown Sequard's "Lectures on the Physiology and Pathology of the Nervous System," Dr. Todd's "Clinical Observations," and Dr. Copland's work on "Apoplexy and Paralysis," with others of minor reputation, constitute so many detached and valuable essays in which mental and cerebral diseases, in their relations to nervous pathology, are partially treated, or incidentally alluded to, and which still leave an important void. Dr. Winslow's *Psychological Journal*, and the *Journal of Mental Science*, edited by Dr. Bucknill, have, in a great measure, diminished the inconvenience which the want of a standard work on the Principles, Pathology, and Practice of Mental and Cerebral Diseases admittedly occasions. This being the condition of English literature, it may be further observed that no author, in any language, has attempted to lay down principles for the recognition of symptoms which precede diseases of the mind or brain, while they yet admit of prevention or cure. Dr. Winslow whose extensive learning and varied experience pre-eminently qualify him for so grave a responsibility, undertakes to supply a great desideratum in medical literature. His present volume purports to "offer a scientific analysis of those complex and subtle phenomena which mark the *incipient* stages of mental and encephalic diseases, as an *avant-coureur* to a distinct work on Softening of the Brain, and other specific and individual types of cerebral disease." Such an unassuming prefatory observation is scarcely calculated to prepare the profession for a most masterly exposition of every conceivable phase which cerebral disease, in its psychical and physical operations, has been known to assume. The extent of this hitherto untried field may be inferred from the order in which Dr. Winslow proposes to enter on its investigation. His method is as follows:—

1. Morbid Phenomena of Intelligence.
2. Morbid States of Motion.
3. Morbid Conditions of Sensation.
4. Morbid Phenomena of the Special Senses.
5. Morbid Phenomena of Sleep and Dreaming.
6. Morbid Phenomena of Organic or Nutritive Life.
7. General Principles of Pathology, Treatment, and Prophylaxis.

It is obvious that to traverse so comprehensive a range is beyond the scope of a necessarily limited review. The work is fairly susceptible of consideration in its psychical, juridical, and cerebro-pathological aspects, and under these heads we may with advantage investigate its merits.

The notion that cerebral affections are not subject to general pathological laws has long proved a shield for ignorance and incompetency. Dr. Winslow not only shows the utter fallacy of such a notion, but also forcibly demonstrates the danger which results from the neglect of the premonitory symptoms of cerebral affections present. Appealing from analogy to experience, he asserts, as a general postulate, that the brain being the physical medium through which the mind manifests its varied powers, all structural lesions of the encephalon, its investing membranes, and bloodvessels, are associated with adequate and appreciable derangement, modification, or alteration of its several functions:—

> "The affections of the brain have, I maintain, undoubtedly a premonitory and precursory stage.
>
> "In every case of disease of the encephalon, particularly if the organic change or pressure be established in the vesicular matter, or in the membranes immediately investing the brain, a disordered, or abnormal state of cerebro-psychical phenomena may, in the incipient stage, on careful examination, be detected."

This assertion is tantamount to a declaration that the psychologist stands in the same relation to mental and cerebral diseases as the general physician does to cases ordinarily presenting themselves. The importance of this truth cannot be too highly estimated, and will be evidenced as we proceed.

In discussing the Morbid Phenomena of Intelligence, Dr. Winslow graphically sets forth the principles of diagnosis between an unnatural and often suddenly developed flow of animal spirits which merges into a state of unhealthy mental exaltation, as distinguished from a normally excited mental condition. The wide influence which depression exercises, ranging from mere listlessness to acute melancholia, leads to interesting investigations into the nature of *ennui*, which, from the conflict of thought and principles marking the struggles of natural instincts and impulses during its continuance, is argued to be not always a condition of mental inactivity. The morbid affections of mind denoted by certain marked deviations from ordinary phases of *thought*, and normal modes of action or *conduct*, are reviewed in their contrast with temporary and transient exaggerations of health. These various gradations of psychical disorder and weakness, observed to blend almost imperceptibly with each other, Dr. Winslow describes as

> "Extending from the shadowy forms of false perception, erroneous judgment, paralysed volition, perversions of the moral sense, derangement and confusion of thought, to positive hallucinations and clearly manifested insane delusions; and from brain-fag, cerebral lassitude, loss of mental stamina, tone, weakened memory (*dysmnesia*), actual loss of memory (*amnesia*), and flagging powers of attention, to obvious states of imbecility and idiocy."

Passing from these phenomena as indicative of the earliest cerebral changes, their further progress when constituting Premonitory Symptoms of Insanity comes under review. Dr. Winslow believes there are four philosophical *points d'appui* which the psychological physician should analyze with metaphysical exactness and scientific precision, in order to obtain a right appreciation of the mind in its incipient as well as matured conditions of disorder. These are—

> "1. The present limited knowledge of the physiology of the nervous system, and ignorance of the phenomena of mind and life.
>
> "2. Analogy between insanity and dreaming.
>
> "3. State of the mind when passing into a condition of alienation, as deduced from the written confessions of patients after recovery.
>
> "4. Morbid phenomena of thought, as manifested during the states of transition, and convalescence from attacks of insanity."

The different questions which have at various times been propounded in reference to the nature of insanity, together with the several problems its intricate character suggests, are set forth with perspicuity, for the purpose of showing the extent of our ignorance of subtle abnormal mental phenomena, as well as our limited knowledge of the healthy constitution of the human mind. Inquiries thus induced are subordinated to the investigation of the mind in the incipient stage of disorder when passing into one of its numerous phases of disease, and to its state when emerging out of a *morbid* condition into one of *healthy* thought. Dr. Winslow urges the adoption of a rigid process of synthesis as well as of analysis for the just appreciation of the stages through which the mind passes when, deprived by disease of its power of healthy co-ordination, it lapses into an automatic condition.

The investigation of the laws governing the operation of thought leads to the consideration of the theories of Cousin and Sir Wm. Hamilton as to native mental cognitions and primary conditions of intelligence. Dr. Winslow believes the "regulative faculty" to rest in the cerebrum, in complete analogy to that subtle principle or force evolved in the cerebellum, which establishes a unity of action in, adjusts, harmonizes, and co-ordinates the varied muscular movements of the body. This view is strongly confirmed by the observation of certain forms of disease in which the fine relations of the cerebral functions are disturbed, without any appreciable manifestation of physical derangement.

> "There is," writes Dr. Winslow, "a *psychical* as well as a *physical* chorea, or St. Vitus' dance, in which the patient is not under the influence of any fixed or transient delusion. In these cases, the insanity appears to depend upon a *disordered state of the psychical co-ordinating power* (eliminated, in all probability, in the *cerebrum*), and paralysis of what may be designated the *executive*, or, to adopt the phraseology of Sir Wm. Hamilton, 'regulative' and 'legislative' faculties of the mind."

This highly original and most important view of psychical action is one capable of explaining many of those apparent anomalies which mental diseases present. The mind *disordered*, though not *deranged*, has often puzzled psychologists. This choreic type of insanity, Dr. Winslow shows, is often unassociated with any form of delusion, hallucination, or illusion. In women it has been observed to be connected with obscure irritation and disease of the uterine system; in men, we may add, similar phenomena have resulted from certain forms of prostatic disease.

The close resemblance between the mental impressions experienced in dreaming and the automatic operations of the intellect, observed in insanity, is suggestive of inquiries into the nature of volitional power, its influence over certain trains of healthy thought, and its capability of guiding certain admittedly morbid conditions of the intellect. Its abeyance in health whilst dreaming results in the similitude of disease; its exercise in disease in a waking state produces a resemblance to dreaming. Insanity and dreaming are thus shown to bear to volition a kind of correlation, which in prognosis is not without significance. Illustrative cases are detailed, in which, during sleep, the will, impulses, emotions, ideas, and passions appeared to undergo similar influences to those observable in cerebral affections.

The condition of the mind when in a state of aberration is portrayed with much force in the confessions of patients after recovery. Where *all* the powers of the mind are not alienated or overthrown, Dr. Winslow believes the sufferer may be so far conscious of his disorder as to be able to describe his sensations clearly. This admission we shall have occasion to refer to in estimating certain *pseudo* forms of mental disorder.

In recounting the circumstances which have led to the present great improvement in the condition of the insane, and to the progress made in the *pathology* as well as *therapuetics* of insanity, the labors of Dr. Conolly are deservedly eulogised.

Anomalous and masked affections of the mind obtain lengthened consideration. The absence of any psychical test to which, judicially and psychologically, appeal might with safety be made in difficult instances, is found to be owing to the variable nature of the disease, as well as to the difference which in health distinguishes individual minds. Dr. Winslow writes.—

> "Each case must be examined by, and in relation to, itself, and not in reference to any preconceived definition or *à priori* hypothesis of insanity."

The obscurity surrounding certain unrecognised morbid states most frequently implicating the affections, propensities, appetites, and moral sense, is shown to result from their liability to be confounded with conditions beyond the legitimate domain of pathology, which "do not come within the province of the physician, unless they can be plainly demonstrated to be *morbid results*, and positive and clearly-established deviations from cerebral or mental health." The serious consequences which ensue on a non-recognition of these forms of disease Dr. Winslow believes cannot be too highly estimated. Alluding to those *psuedo* mental conditions which give undue prominence to a particular faculty, or seize hold of one passion or appetite, he writes:

> "Many of these sad afflictions are symptomatic of unobserved and, consequently, neglected cerebral conditions, either originating in the brain itself, or produced by sympathy with morbid affections existing in close organic relationship to the great nervous centre."

The stage of consciousness, a condition to which observation has not hitherto been directed, receives particular attention. The struggles between reason and insanity, the foreshadowings and morbid apprehensions of the latter, which not unfrequently lead to self-immolation, are patiently traced to their material or mental sources in order to gain the clue to their unravelling.

The stage of exaltation is considered in its psychical and somatic relations. The wit, ingenuity, and cunning of the insane, their self-control and shrewdness, receive explanations, metaphysical and psychical, according to the different physical influences the same disorder exercises on the instinctive appetites as contradistinguished from the intellectual faculties:

> "In its incipient stage," Dr. Winslow writes, "mental disease is characterized generally by acute morbid sensibility, physical and mental, accompanied by a difficulty in fixing the attention.
>
> "Insanity often first shows itself in a morbid exaggeration—a diseased excess in the development of normal healthy mental conditions.
>
> "These phases of mind, necessarily obscure, frequently manifest themselves in either an exalted, depressed, or vitiated state of the moral faculties."

Observations of this character are but the prelude to the enumeration of cases which stamp the volume under consideration as a practical clinical exposition of the vital manifestations of disease.

Alterations of character and disposition, morbid views of religion, unaccountable acts of brutality and immorality, recklessness in expense, erotic excitement, and diseased imagination as distinguished from the operations of vice—each and all of these various moods, in their several manifestations, Dr. Winslow believes to constitute a type of morbid mental disorder, which exists to a frightful extent in real life. Its detection, he affirms, is happily within the reach of the physician who, "to a practical knowledge of human nature adds an acquaintance with the higher departments of mental and moral philosophy, as well as of cerebral pathology."

The stages of mental depression and aberration in which the intellectual, perceptive, and moral faculties become involved, suggest inquiries as to what means exist of detecting the fatal boundary line separating the sane from the deranged mind. In the former of these conditions, the presence of latent and concealed delusions explains the fact of self-destruction, in which cases of that class not unusually end. The steps by which such a condition is accomplished, the struggles between sane knowledge and insane apprehensions, the inward strivings and outward watchings, marking the ebb and flow of disease, are traced from their trivial and insignificant beginnings to the stage when

> "The intellect at last yields to the pressure, and the general health becoming deranged, the idea which was originally only an extravagant conception, assumes the dimensions of a clearly manifested delusion: in other words, *a fixed and settled insane idea*; the insanity consisting not in a creation of the fancy *de novo*, but in a morbid *exaggeration* and insane *perversion* of actually existing circumstances."

Impairment of Mind as manifest in its general weakness, morbid phenomena of Attention, and morbid phenomena of Memory conclude the subjects discussed in the first section of the divisions adopted for the purposes of review.

It will be first apparent from the extent and nature of this imperfect analysis of its first section, that Dr. Winslow has produced no ordinary book. The plan on which it is carried out is altogether original. Complete in range, exact in description, copious in matter, and abounding with cases, its worth may be said to consist as much in its enumeration of sources of error as in its exposition of principles of truth.

. The morbid phenomena of Memory have rarely been subjected to such searching analysis as they receive from Dr. Winslow. Not only does he investigate the impairment and aberration of memory, which may properly be considered symptomatic of acute disease of the brain and disorder of the mind, but he also points out the characteristics of "those singularly obscure and inexplicable cases of total and modified paralysis of the faculty consequent upon injuries inflicted on the delicate nerve-vesicle, either by inflammation resulting in adventitious depositions in the substance or on the surface of the brain and its membranes, mechanical violence to the head, or by atheromatous changes in the structure of the cerebral vessels (fatty degeneration,) disordered state of the cranial circulation, and condition of mal-nerve nutrition."

His order of inquiry involves the consideration of—

1. Acute Disorders of the Memory.
2. Chronic (modified) Affections of the Memory.

These divisions are illustrated by a variety of cases exhibiting the several curious phases which disease has been observed to present through that faculty. All these cases are deserving of the most careful study. Whether they, with the observations which accompany them, be regarded as accurate delineations of rare forms of morbid action, or philosophic disquisitions on the vital pathology of the early stages of intracranial mischief, they are equally entitled to occupy the first place in the judgment of the physician who is likely to be consulted, under circumstances of doubt or difficulty, in reference to the diseases they exemplify.

The natural order in which various classes of ideas stand in relation to each other, both as to the priority of their admission into the mind and durability of their impressions on the sensorium, is considered for the practical purpose of diagnosis. Dr. Winslow adopts the views of Gratiolet, that "general ideas disappear from the mind only after those that are particular and contingent." Dr. Itard confirms these views by his observations, that, "in the loss of memory that generally accompanies attacks of apoplexy occurring in advanced life, there is first a forgetfulness of names, then of substances, then of verbs, and next of adjectives." Psychology and pathology are thus placed in apposition for the mutual support of each other. Correct views of natural or healthy action prepare the way for the just appreciation of disease. No author has hitherto attempted that which Dr. Winslow must be regarded as having here most successfully accomplished—a complete philosophic analysis of the various phenomena which the memory exhibits from the earliest indication to the ultimate completion of disease of the brain. Though we cannot attempt even an epitome of the five chapters occupied by this interesting and important subject, it is yet due to the author that special notice be directed to his views on the psychology and pathology of memory.

> "It is difficult," writes Dr. Winslow, "to suggest a physiological or metaphysical hypothesis which satisfactorily explains those remarkable conditions of mental paralysis, singular manifestations and aberrations of memory, (previously referred to,) as preceding, accompanying, and following acute and chronic affections of the brain, unless we espouse the doctrine of the *indestructibility of ideas*, and subscribe to the notion that no impression made upon the mind is ever destroyed."

It is obvious that this is one of those theories which admit of but negative proofs. Pathology controverts the proposition that the mind has a fixed relation to any ascertained cerebral condition. Experience affirms that, however the physical instrument is capable of modifying mental action, no reasoning can satisfactorily explain the nature of the process which is involved in its primary development. If this be so, and we apprehend that neither proposition can be refuted, it follows that the theory which embraces the largest number of facts, and admits of fewest exceptions, is that which must most closely approximate to truth. Dr. Winslow advances strong claims for the adoption of the views which he suggests. He says:

> "The theory of the persistent and indestructible character of psychical impressions is *countenanced* (I will not say *established*) by phenomena observed during various abnormal *mental* and disordered *cerebral* conditions. I refer—
>
> "1. To the state of the intellect as manifested in certain forms of asphyxia, caused by drowning and hanging.
>
> "2. To the condition of the mind as exhibited previously to death.
>
> "3. To the morbid mental phenomena observed to result from injuries inflicted upon the brain, or to follow the particular types of encephalic disease."

Having set forth many remarkable illustrations in corroboration of his suggestions, Dr. Winslow proceeds to investigate the immediate physical operations which accompany or eventuate in an act of thought. The aggregations of grey matter on the hemispherical surface of the brain are compared to a galvanic battery placed at the extremity of, or in connexion with, a number of electric wires (the white or medullary cerebral matter). This theory finds corroboration in the incidents of disease, as well as from the results of accident. In support of both of these propositions, Dr. Winslow writes with the view of placing before the profession the anomalies, difficulties, and doubts which envelop the whole subject of cerebral and mental pathology; and this he does in a manner and with an authority well calculated to deter the ignorant from lightly estimating the danger diseases of the brain present, while at the same time he conveys to the scientific practitioner additional confidence in the curative resources within his reach.

We pass to a consideration of the work in its juridical aspects.

The entire volume abounds with observations of great importance to the medical jurist. The position of a psychological "expert" is at all times one of deep responsibility. The administration of public justice, the disposition of private property, the reputation as well as the sustenance of families, are not unfrequently determined by the scientific opinions delivered in the witness-box. Justice, holding the scales between law and medicine, in the vindication of the one finds nothing antagonistic to a full recognition of the claims of the other. It is the conflict of medical testimony which invests with doubt decisions that would otherwise never be questioned. Nothing can be more pitiable than the antagonism of psychological opinions which in medico-legal questions is occasionally observable. This caused the late learned Baron Alderson to exclaim from the bench, that "medical men seldom did more than embarrass the conduct of a case." Dr. Winslow ably vindicates the claims to confidence which should attach to the opinions of an educated and experienced class of *specialists*, when requested to solve knotty and recondite questions connected with alleged states of mental aberration. He writes:—

> "We have recourse to able, skilled, and scientific witnesses to elucidate difficult and disputed points in engineering, architecture, mechanics, navigation, feigned writing, chemistry, and many of the exact, as well as speculative sciences; and upon what ground should we repudiate the testimony of learned and experienced men, practically acquainted with the phenomena of insanity?"

Dr. Winslow ably points out the complex and difficult circumstances under which the psychologist is frequently asked his opinion:—

> "The annals of our Courts of Law establish, beyond a doubt, that the criminal and homicidal lunatic almost invariably belongs to the class of quiet, cunning, subtle, clever, and what Esquirol terms 'reasoning' madmen. How rare it is to see a person laboring under *acute* insanity tried for a capital crime? In the majority of cases, the lunatic, although suffering from a dangerous and homicidal form of mental derangement, has sufficient self-possession and control over his disordered thoughts to converse and comport himself like a person in healthy possession of his reasoning powers. This is a type of case that so often deceives the most conscientious judge, puzzles and perplexes the most painstaking body of men impannelled (as a jury) to try the issue of sanity or insanity, life or death."

It must not be forgotten that in many cases of medico-legal inquiry psychology is placed on its trial. Conscientious and experienced physicians have, on occasions, had their opinions rejected by juries impressed with the deepest anxiety to arrive at the truth. Dr. Winslow particularizes a mental condition of great interest to the jurist, as well as the to the practical psychologist: he refers to

> "The subtlety, quickness of apprehension, ready wit, biting sarcasm, great powers of self-control, extreme cunning, and extraordinary shrewdness of the insane, as well as the wonderful mastery they have occasionally been seen to exercise over their acknowledged delusions whilst under the searching analysis of the ablest and most accomplished advocates of the day. In many cases it has been proved to be useless to possess the 'key-note' to the insanity of the person under examination, or to 'touch the chord' supposed to be in unison with, and likely to awaken into activity, the latent insane delusion and cunningly concealed hallucination. The lunatic, if he be carefully trained and skilfully tutored, having an important purpose to accomplish by *masking* his mental disorder, will, under these circumstances, act with wonderful ability and singular ingenuity on the *defensive*, and, in the teeth of the most stringent examination, make 'no sign.' How often have I seen the insane (*who had been previously well prepared*) thus baffle the acumen of the most experienced and sagacious members of the bar."

It is well that medical men bear in mind facts of this nature. They tend to impress the necessity for close and frequent investigation before pronouncing opinions, the ultimate consequences of which may not or cannot at the time be estimated.

The results of *diseased* brain and *disordered* mind in their contrast with depraved morals and vicious purposes are fully investigated. Cases are detailed in which the mind, though *pathologically* disordered, could not be pronounced to be *legally* insane—in which the fine partition separating sanity from insanity permitted both to intermingle, producing a condition in which clear disorder of the mind was evidently present, yet not sufficiently so to justify the signing a medical certificate for the purpose of placing the individual so affected under control. In his observations in reference to such complex forms of mental disease, Dr. Winslow observes:—

> "Subtle cases like these present but few difficulties to the *practical* physician thoroughly conversant with the phenomena of insanity, and well acquainted with the physiognomy and idiosyncrasies of the insane."

The apparent anomaly which exists in reference to the degree of evidence requisite to establish mental unsoundness in different cases is next investigated. The mental condition of the suicide is seldom a matter which leads to much discussion. The evidence considered as demonstratively conclusive in such a case would in another, where property was involved, be visited with severe censure. Dr. Winslow argues this question with the view of showing the serious and fatal mischief that may follow an inconsiderate and hasty repudiation, on the part of a jury, of unsoundness of mind. The mischief of this is more especially manifest in cases where testamentary as well as other acts are executed under the combined influence of *legally undetected* insanity and natural anger, directed towards those who, influenced by the kindest and most honorable motives, have incurred severe displeasure by initiating proceedings in lunacy in the Court of Chancery for the sole advantage of the alleged sufferer.

The peculiarity of Dr. Winslow's writings is the complete identification with each other which the several topics discussed maintain. The study of one prepares the way for the reception of the other. It is thus that the reader, having been familiarized with the nicer points involved in the diagnosis of mental disease, and impressed with the serious difficulties which beset opinions formed even under the most favorably circumstances for observation, is still prepared, when discussing abstruse illustrations, to read :—

> "The coarser and more demonstrative symptoms of insanity are obviously patent to men of common intelligence and ordinary knowledge; but the less manifested, more obscure, and *hidden* types of mental disease require for their satisfactory elucidation an intimate and profound acquaintance with the physiology as well as pathology, of the human mind."
>
> "In cases of alleged insanity, he (the psychological expert) is occasionally compelled, when elucidating, in courts of law, the phenomena of mental derangement, to enunciate principles, as a pioneer of truth, *in advance* of the knowledge possessed by those who sometimes examine, and often severely, unjustly criticise and calumniate him. When giving evidence on scientific points, he is occasionally and unavoidably obliged, in the expressions of his opinions, to go counter to what is termed the 'generally received' notions on the subject of insanity."

Before leaving this part of Dr. Winslow's work, a topic suggests itself which it is of the first importance to rightly estimate : it is the value to be attached to the abstract opinions of experts, formed from details of facts of which they had no previous personal knowledge. The observations we quote are in reference to a misconception which seems to have arisen respecting the grounds of Dr. Winslow's opinion on he case of Atkinson, tried at York in 1858; they are as follows :—

> "I remarked, that if a man were accused and tried for a murder committed some time previously, and the plea of insanity were urged in his defence upon what was conceived to be the strong and *bonâ-fide* evidence of *competent eye-witnesses, practically acquainted with the prisoner's state of mind at the time he committed the crime*, I should consider it a duty to hesitate in pronouncing in a court of law (the life of the prisoner being dependent upon *my* evidence) a *speculative* opinion of his perfect sanity of mind and moral responsibility in direct opposition to the *positive* testimony of others, basing my conclusions on the examination I had made of the prisoner's state of intellect some time after the perpetration of the imputed crime, and immediately previous to his trial."

The extracts we have given will serve to indicate the full and comprehensive manner in which the juridical questions are discussed. We believe that the principles therein enunciated, and the illustrations afforded, will go far to remove those difficulties and dissipate those doubts which have hitherto placed investigations into conditions of mind apparently beyond the scope of practical science. Certainly they cannot fail to impress their readers with a deep sense of the responsibility which the law as well as their fellow-men attach to those opinions that from time to time they may be called on to deliver.

This will be the future British text-book on mental and cerebral pathology. It is the most important work that has appeared in this country for many years, in relation to subtle affections of the mind, and obscure and insidious diseases of the brain. It should be carefully read and closely studied by every student as well as by every practitioner who is anxious to become acquainted with the most improved modern scientific views of the nature and treatment of all cerebro-psychical affections.

The Pathology and Treatment of Venereal Diseases, comprising the most recent Doctrines on the subject. By JOHN HARRISON, F.R.C.S. 8vo, pp. 176. London: Simpkin and Marshall.

THE claim to a scientific character which Mr. Harrison puts forward in favor of the subject of venereal diseases will be found amply justified on a perusal of the work before us. In it the pathology of these diseases is so traced as to raise in the reader's mind a degree of interest which was scarcely to have been expected from such a subject. By distinguishing the simple or soft chancre and the true or indurated chancre from each other, we are taught to understand how, of two persons having sores, one remains free from constitutional infection, while the other suffers that very severe infliction. The laws relating to the transmission of syphilis by inoculation are explained, and the specific exanthematous nature of the disease pointed out. Constitutional symptoms are successively described, as they are manifested in the skin, throat, mouth and nose, the eye, the ear, the testicle, periosteum, bones, and viscera; whilst their treatment is discussed under the heads of Secondary Transition and Tertiary Symptoms, particular remedies being applied to each of these groups, for example, mercury in the secondary group, iodine and mercury in the transition group, and iodine in the tertiary.

One of the most interesting chapters of this work is that on Syphilis in Infants.

"In cases of syphilis affecting infants," Mr. Harrison observes, "it is important to determine whether the disease has been contracted at birth, by contact with primary sores on the mother's genital parts, or whether it is hereditary, or whether infection has been received after birth from a hired wet-nurse." —p. 32.

The extraordinarily contagious nature of hereditary congenital syphilis is thus pointed out :—

"In illustration of the hereditary transmission of the syphilitic poison, let us suppose a case of super-

> fœtation, such as that which has been often quoted, in which a white woman, having been violated by a black slave one morning, shortly after her white husband had left the bed, gave birth, in due time to twins—the one infant being white, and the other colored; and let us suppose that both the woman and her husband were of pure and healthy blood, but the negro slave of syphilitic taint. If, now, in the course of her pregnancy, the woman manifested symptoms of constitutional syphilis, and if both infants were born diseased, the question arises, how was the infection propagated? The ovum impregnated by the black man had at the same time received the poison, so that the resulting fœtus became diseased. This fœtus communicated the infection to its mother, and she, on the other hand, communicated it to the twin fœtus she had healthily conceived by her own husband."—p. 33.

On the perplexed question of transmissibility of infection from secondary sores, Mr. Harrison remarks:

> "Practically speaking, it may be said that a healthy male runs little risk of infection from commerce with a female affected with secondary symptoms, and secondary symptoms only, excepting, perhaps, mucous tubercles of the genitals. But the case is different with a healthy female having connexion with a constitutionally syphilitic male; for, as we have seen in Chapter III., although the woman may not directly contract the disease, yet, if she becomes pregnant, the fœtus inheriting syphilis from the father will probably infect her. It is to be remarked that in almost all the alleged cases of transmission from secondary ulcers, it has been from the male to the female that the infection has passed. In such cases of infection of the mother by the fœtus, the first symptoms often have their seat in a region of the body where they could not have presented themselves, had the disease originated directly in sexual intercourse or even by any kind of contact. In a woman thus infected through the fœtus, the symptoms arose as follows:—Headache, general roseolar eruption, and in three weeks thereafter mucous tubercles in the throat and the genito crural region; she had no chancre nor bubo. The man had no primary symptoms."—p. 50.

Again:—

> "The effect of the contagion of syphilis, when contracted by transmission from secondary sores, is, according to M. Rollet, of Lyons, an ulcer which becomes developed after a variable period of incubation, which presents all the characters of the true primary syphilitic chancre, and is, like it, followed by other secondary symptoms. Inoculation with the matter of secondary ulcers on an uncontaminated individual, when successful, in like manner, produces an ulcer with the same essential characters as the infectious chancre."—p. 52.

After a chapter on the immunity against New Constitutional Infection which one attack of syphilis gives to the system, as in the case of exanthemata, Mr. Harrison discusses the subject of syphilization on repeated inoculations with chancrous virus, which have been alleged to prove not only *curative* of the syphilitic diathesis, but also prophylactic of it. The matter of which the syphilizers have need for these inoculations, the author shows, must have been merely that from *simple chancre*.

In regard to the curative influence of syphilization, Mr. Harrision admits that the evidence is too strong to be doubted; yet he suggests that, as the sores produced were merely simple chancres, the production of tartar-emetic pustules in small successive crops over all the body might answer as well as inoculations. As to the prophylactic power of syphilization, as Mr. Harrison defines the question, he considers it unproved. He then concludes that the propriety and utility of the practice of syphilization are not sufficiently established to warrant us introducing it, except with hesitation and reserve.

Under the head of Non-specific Sores, and under that of Discharges from the Urethra not of a specific gonorrhœal character, Mr. Harrison reproduces the practical observations which he lately communicated to this journal.

The chapter on the Non-identity of the Syphilitic and Gonorrhœal Virus is a very interesting one.

Part II. of the work comprises the chapters on Treatment. Though Mr. Harrison is very circumspect in the use of mercury, he is far from being a non mercurialist. He considers that the previous exhibition of the chlorate of potass puts the system in a more favorable condition for the operation of mercury; for after a course of chlorate of potass, smaller doses of medicine tell with better effect.

After the lengthened analysis we have given of the author's pathology, we cannot go into the details of his treatment; but it is enough to say, that it is characterized by much simplicity. No matter what a practitioner's particular department of practice may be; no matter though cases of primary sores or gonorrhœa may never come under his care, some form or other of constitutional disease assuredly will. He should, therefore, be conversant with venereal disease. Mr. Harrison's work contains much information. To the practitioner who wants merely a view of the most recent doctrines on the subject it is not too long; to the student who wants practical instruction is not too short.

A Practical Treatise on Fractures and Dislocations. By Frank H. Hamilton, M.D., Professor of Surgery in the University of Buffalo; Surgeon to the Buffalo Hospital, &c. Illustrated by 289 woodcuts. pp. 757. Philadelphia.

This is a valuable contribution to the surgery of most important affections, and is the more welcome, inasmuch as at the present time we do not possess a single complete treatise on Fractures and Dislocations in the English language. Sir Astley Cooper's celebrated work on Dislocations, it is true, treated of the Fractures of the Joints also; and since his time several monographs upon various fractures have appeared, partaking generally more or less of a *special* character, and devoted principally to the consideration of some favorite treatment of the writer. The authors of our several modern systems of surgey also have each devoted a few chapters to the consideration of both fractures and dislocations; but it has remained for our American brother to produce a complete treatise upon the subject, and bring together in a convenient form those alterations and improvements which have been made from time to time in the treatment of these affections. One great and valuable feature in the work before us is the fact that it comprises all the improvements introduced into the practice of both English and American Surgery; and though far from omitting mention of our continental neighbors, the author by no means encourages the notion—but too prevalent in some quarters—that nothing can be good unless imported from France or Germany; and he has preferred to write a work replete with the experiences of his countrymen and himself, rather than edit a treatise of some Teutonic *philosoph*.

After short chapters on the general nature of fractures and their mode of cure, the author proceeds to consider the several fractures *seriatim*, from the nasal bones downwards; but we must confess to not understanding why the nose should be taken as the starting point, and not the skull, on the fractures of which it would have been interesting to have had some transatlantic experience. In considering the several fractures, the author aims at practical treatment, rather than at abstruse calculations as to the mode in which the fractures were produced, or the direction the ends of the bones may possibly take; and he illustrates his remarks freely both by cases in his own practice and by others which have been recorded in the American journals that do not ordinarily fall in the way of the English reader. Dr. Hamilton is evidently fully acquainted with all our English standard authors, to whom he constantly refers, although he does not agree with all their propositions or follow their practice in all respects; and we find that in 1844 he visited many of our hospitals and some of those on the Continent. A large number of splints and apparatus are described, many of which are not recommended by the author, in order "that, by a study of the principal forms of approved dressings, the reader may be better prepared for the exigencies of practice; and that, by a simultaneous presentation of those which are not approved, he may be saved from a wasteful expenditure of his time in the contrivance of useless apparatus." The following, however, so fully expresses the feeling which should actuate the true surgeon in this matter, that we cannot do better than quote it in this place:—"It is not in the discovery and multiplication of mechanical expedients that the surgeon of this day declares his superiority, so much as in the skillful and judicious employment of those which are already invented." Nevertheless, the author has in most cases some pet arrangement of his own to recommend; but we must do him the justice to say that he by no means insists upon their adoption to the exclusion of other measures. The latter half of the work is devoted to the consideration of the various dislocations and their appropriate treatment, and its merit is fully equal to that of the preceding portion.

After saying so much in favor of a book, it is painful to have to find fault; but, in common honesty, we are bound to complain of the manner in which this work is illustrated. It is adorned with two hundred and eighty-nine wood-engravings, most of them of great beauty. It is not, therefore, of the artistic skill that we complain, but that a very large proportion of these same cuts are copied line for line from our standard English authors without any acknowledgment whatever, and, therefore pass to the reader as original drawings. Fergusson's "Surgery" seems to have been laid under special contribution, and, in fact, nearly all the drawings showing the anatomical conditions in the several fractures and dislocations are copied from that work, while for other illustrations the author has turned to Erichsen and other English authorities. Published drawings become in a certain sense public property; but when copied, honorable mention should always be made of the source from which they are derived; and since a "List of Illustrations" prefaces this work, proper acknowledgment might have been readily made. The drawings of the various apparatus of American invention we presume to have been copied from the original drawings, and suppose, therefore that Dr. Hamilton is not responsible for the absurd mock-modesty of placing a large fig-leaf over the pubes in the illustration of an apparatus for a fractured thigh!

Glycerin and Cod-Liver Oil; their History, Introduction, Therapeutics, Value, and Claims upon Professional and Public Attention. To which is added a Chapter on Physic-taking, or Counsels for the Sick. By. W. Burnham Willmott, Associate of the Pharmaceutical Society, &c. 12mo, pp. 197. London: Baillière.

A very neat little volume, and apparently composed with great care. On glancing over it, not a word seems to be misplaced. Its contents are indicated by its title. Under the head of Glycerin (as our author chooses to spell it) are considered its uses in diseases of the ear, skin, and eye, as a substitute for other materials in ointments, also with iodide of iron, soap, jelly, tannin, aloes, &c.; and in the first of these sections Mr. Willmott notices the advantages, "confirmed by eminent members of the profession," which attended the introduction of this agent by Mr. T. Wakley as a remedial means in the treatment of deafness. The author does not, however, ride a hobby by recommending as a universal panacea the drug which he has treated of in all its combinations so extensively; he admits that its employment internally in cases of phthisis has signally failed, and that "as a remedial agent in consumption it will bear no comparison with cod-liver oil." To a consideration of the latter remedy he has devoted the second half of his work, including, after its history, preparation, action, tests, and other particulars, a section on the substitutes proposed for it, which consist of the oils of the dugong and pilchard, and a third material, the nature of which has not yet transpired, but which, he says, has apparently been used with success. From the appendix, termed the "Chapter on Physic-taking," we extract the following sensible remarks:—

> "If you are more than slightly unwell, do not attempt to 'doctor' yourself. Rest assured, if you are your own physician, you will have a very foolish person for your patient. It is the province and the duty (a cheerful one at all times) of the medical adviser to relieve—to the extent of his ability—bodily suffering, and therefore in his hands you should

unhesitatingly place yourself. 'If all progress not so favorably as you would wish, be patient and reasonable enough to remember that your medical man is but a man, and acts to the best of his judgment and ability. For his own reputation, for the love of humanity, and the delight of doing good, all that art and science can do, or that he can command, he will bring to his aid; this is all on the supposition that you are in the hands of a qualified, respectable, and experienced practitioner.'........Be sure of one thing—do not apply for advice to the professional charlatan, who flourishes on a system of chicanery and extortion. As invalids, you will need to avoid quacks of all kinds, who prey upon the credulity of the public. Street doctors, herbalists, pill-vendors, and those, in short, who pretend to cure every ailment by specifics of their own invention, all rank with that class, which, if you have any regard for your health, you will especially ignore. It is far better to trust to nature herself for a cure, than to swallow the nostrums of the empiric. Permit me to urge that you should seek advice in the proper quarter, and that without delay."—p. 164.

This little work is really deserving of attention.

The Pathology and Treatment of Stricture of the Urethra and Urinary Fistula. By HENRY THOMPSON, F.R.C.S. Second Edition. London: Churchill. 1858.

ON the first appearance of Mr. Thompson's work on Stricture, in 1853, we expressed a high opinion of its merits. This opinion has been confirmed by a perusal of the second edition, which is not a simple reprint or reproduction of the first, but contains numerous additions of an extensive character required by the improved methods of treating the disease of which the work treats, and suggested by the increased experience of its author. These additions have reference, however, not merely to the treatment, but to the anatomy, pathology, and diagnosis of stricture. Thus, at p. 57, we have an *anatomical* classification of strictures, as observed in dissections, into the four varieties of—1, *linear*; 2, *annular*; 3, *indurated annular*; 4, *irregular* or *tortuous*. And at p. 100, these diseases are arranged according to their pathological phenomena presented during life, into—1, the *simple*; 2, the *sensitive* or *irritable*; and 3, the *contractile* or *resilient* stricture.

The much-vexed question as to the most frequent seat of stricture was ably and fully handled by Mr. Thompson in the first edition of his work. In the present edition he states, that careful re-examination has led him to modify an opinion there expressed that the junction of the bulbous and the membranous portions of the canal was most commonly affected. He now finds "that the part of the urethra most frequently affected with stricture is the portion comprised in the inch anterior to the junction—that is, the posterior or bulbous part of the spongy portion."—p. 83.

The chapter on the Diagnosis of Permanent Stricture has been greatly enlarged, and contains much valuable new matter.

The subject of treatment, in a work on a special disease, is one that we always approach with no little hesitation. We are generally prepared to find that, however scientific and elaborate the anatomical and pathological chapters may be, those on treatment are replete with descriptions of the author's own special crotchets, the introduction of which to the public as well as to the profession is probably the main object of the book. But in this respect Mr. Thompson's treatise offers a remarkable and praiseworthy exception to the rule. No one special mode of treatment is recommended as applicable to all strictures, but in an eclectic and philosophical spirit he balances the comparative merits of the various methods now practised. Mr. Thompson evidently regards *strictures* as a class of diseases that do not admit of successful treatment by any one method, but in which every case requires to be regarded from an independent point of view, and to be subjected to that plan to which it is more especially amenable. Thus the treatment of stricture by dilatation, by the external and by the internal incision, are considered and analyzed. Although strongly advocating dilatation as the safest and most efficient mode of treating strictures generally, the author recommends the employment of external and internal urethrotomy in certain cases which he thinks are not amenable to successful treatment by dilatation alone. We are of opinion that Mr. Thompson has not been sufficiently guarded in his recommendation of urethrotomy. There cannot be a doubt that additional experience as to the advantages and safety of the treatment by rapid dilatation and absorption, accomplished with the newly-invented tubular dilators, will induce Mr. Thompson, who is both an observer and a thinker, to greatly modify his views on the subject.

Hæmorrhoids and Prolapsus of the Rectum, their Pathology and Treatment; with especial reference to the Application of Nitric Acid. By HENRY SMITH, F.R.C.S., Surgeon to the Westminster General Dispensary, formerly House-Surgeon to King's College Hospital. Second Edition. pp. 108. London: Churchill.

THIS is an expansion of Mr. Smith's pamphlet on the same subject issued last year, and the author has in the present volume entered more fully into the various pathological conditions of the rectum, besides adding several additional cases of successful treatment. Although holding nitric acid in the highest estimation, the author does not discard other modes of treatment, such as the ligature; and very properly insists upon the necessity of combining the use of the scissors with the nitric acid. There can be no question that the removal of the superabundant skin around the anus is most essential for the proper treatment both of piles and prolapsus, since its presence interferes with, if it does not prevent, the proper action of the sphincter muscle. The author records eighteen most successful cases of his own, the majority treated by nitric acid alone or conjoined with other remedies: but we would venture to recommend to his notice, as worthy of trial, the plan devised by Mr. Henry Lee, of strangulating the neck of an internal hæmorrhoidal tumour by means of an ingenious double speculum, then excising the growth and applying the acid to the wound, as a method calculated still further to decrease the possible danger arising from the use of the ligature. The very free use made by Mr. Smith of the acid in the treatment of prolapsus will tend to relieve the surgeon's mind as to any danger which may arise from such energetic measures, the results being in every way most satisfactory.

Palæontology; or a systematic Summary of Extinct Animals, and their Geological Relations. By Richard Owen, F.R.S. pp. 420. Edinburgh: A. & C. Black. London: Longmans.

The advantages we of the present day enjoy in being able to consult works on almost every subdivision of the different branches of Natural Science are unquestionably very great. This remark, perhaps, more particularly applies to the study of the animal kingdom, including both the recent and fossil species. Most of the latter have been illustrated in the magnificent works of the Palæontographical Society, but as they are not easily accessible to the general reader, something more was wanted to give a systematic summary of extinct animals, combined with their geological relations, which should at the same time prove available as a text-book to all. This desideratum has been well supplied in the work before us, which is copiously illustrated by drawings of the leading types of species. The general arrangement of the work is, indeed, everything that could be desired. Amongst other important subjects discussed are,—The Geographical Distribution of Animals, as modified in past time; the Extinction of Species; the Antiquity of the Human Race; Flint Weapons in Stratified Gravel and in Caves; and the Origin of Species, together with the various hypotheses on that interesting and highly important subject. The following are some of the Professor's concluding observations:—

> “Turning from a retrospect into past time for the prospect of time to come, I may crave indulgence for a few words, of mere sound, perhaps, than significance, relative to the amount of prophetic insight imparted by Palæontology. But the reflective mind cannot evade or resist the tendency to speculate on the future course and fate of vital phenomena in this planet. There seems to have been a time when life was not; there may, therefore, be a period when it will cease to be.
>
> “Our most soaring speculation still show a kinship to our nature; we see the element of finality in so much that we have cognizance of, that it must needs mingle with our thoughts, and bias our conclusions on many things.
>
> “The end of the world has been presented to man's mind under divers aspects: as a general conflagration; as the same, preceded by a millenial exaltation of the world to a paradisiacal state—the abode of a higher race of intelligences.
>
> “If the guide-post of Palæontology may seem to point to a course ascending to the latter condition of the speculation, it points but a very short way, and in leaving it we find ourselves in a wilderness of conjecture, where to try to advance is to find ourselves ‘in wandering mazes lost.’
>
> With much more satisfaction do I return to the legitimate deductions from the phenomena which have been under review.
>
> “In the survey which has been taken of various forms of life that have passed away—of their characters, succession, geological position, and geographical distribution,—if I have succeeded in demonstrating the adaptation of any structure to the exigencies, habits, and well being of the species, I have fulfilled one object which I had in view,—namely to set forth the beneficence and intelligence of the Creative Power.”

The labors of the distinguished Professor in the cause of science are so well known and so universally appreciated, that any commendation of the present work from us would be superfluous. It adds another laurel to the wreath of fame with which his brow has long been deservedly adorned. No one with any pretension to science should be without Owen's Palæontology.

A New and Rational Explanation of the Diseases peculiar to Infants and Mothers; with Obvious Suggestions for their Prevention and Cure. By Thomas Ballard, M.R.C.S.E., L.S.A., &c. pp. 128. London: Churchill.

Not having had an opportunity of hearing the papers forming the basis of this work read before the Harveian Society, we were somewhat puzzled, as we glanced over the title-page of Mr. Ballard's volume, about the “explanation” we were going to receive. We confess that we looked rather shy upon the affair, assuming the pages in our hand to afford only another example of working the present rather popular “dodge” of mourning over infants to catch “Rachels.” We persued the book, however, and found ourselves mistaken. We had to acknowledge to having received some useful information, valuable hints for directing our clinical observation to an important field of inquiry, and much matter for careful reconsideration in our own minds. In fact, whilst out of Mr. Ballard's 128 pages we expected to get only annoyance, we, on the contrary, reaped from them much satisfaction. The author is an acute, careful observer, and argues often convincingly, alway ingeniously. But we cannot agree with him in his extreme generalization. The particular cause of mischief he adduces operates, we believe, to a considerable extent; but we must pause before accepting it as the chief worker of evil under all the circumstances which he brings forward, whether relative to the child or the mother. But what is Mr. Ballard's theory? We let him explain it in his own words:—

> “Dr. Brown-Séquard, says—‘The excitation of the nerves of taste produces an abundant reflex secretion of gastric juice, and also a flow of bile and pancreatic juice in the bowels.’ The act of sucking being, *par excellence*, the mode to induce this excitation, it is obvious that these juices must be secreted abundantly during the exercise of this act; and if at the same time a supply of food is received into the stomach, the solvent power of the gastric juice is exerted upon it, and the first process of a healthy digestion results; but should the *sucking* have been *fruitless*, or partially so, it will in all probability have been *forcible*

and *prolonged*, and therefore attended by an excessive reflex secretion of gastric juice, which, not meeting with a proportionate supply of food whereon to expend its solvent power, acts upon the mucous coat of the stomach and intestines, and causes various degrees of injury thereto........The evidence of this process of injury to the intestinal canal being in operation is the presence of those symptoms which immediately result from it—viz., abdominal pain and the frequent and green stools, to which sucking infants are liable. A persistence of this morbid state causes many of those ailments which are usually attributed to teething......erythema, urticaria, and eczema......anæmia.....laryngismus stridulus, convulsions, cerebral congestion, and hydrocephalus.......invagnation, tabes, mesenterica—in short, all the diseases of infancy in which we can recognise a failure of the processes of growth and nutrition may be fairly attributed to *fruitless sucking* as a principal, if not the chief cause."—p. 1.

Mr. Ballard thus not only traces most of the diseases peculiar to infancy to one common source, but endeavors to prove that many affections also of the mother during the puerperal state are, either directly or indirectly, due to the effects of "forcible and prolonged sucking." Chapped nipples, mammary abscess, after-pains, feverishness, milk fever, and "probably some of the worst cases of puerperal fever," are believed by Mr. Ballard to be due to the cause just mentioned. No doubt many of our readers will smile at all this, and, as we have already said, it is our own opinion that the author carries his views too far. But we strongly recommend judgment to be suspended, and the work itself to be carefully perused before forming a conclusion. One thing we are sure of, that to every practitioner having much to do with infants and children, a perusal of Mr. Ballard's volume will be attended with profit. We refer to the book itself, therefore, for all information regarding the working out of the problem the author proposes, simply remarking that any exaggeration fallen into is fairly compensated by the freshness of the truths undoubtedly exposed.

On Consumption, its True Nature and successful Treatment. By Godwin Timms, M.D. Lond., M.R.C.P., &c. pp. 412. London: Churchill.

What! more than four hundred pages again upon "Consumption"! we mentally exclaimed, as we glanced through this book. Surely the author must have something wonderful to tell us, or he would never have taken refuge in this very ancient asylum for professional *littérateurs*. And sure enough he has—nothing short, indeed, of the *true* nature and *successful* treatment of a very cruel scourge. We will not ask the reader to accompany us in a critical foray through the hundreds of pages here presented to us. We will content ourselves simply with asking him to ponder over the following propositions laid down by the author:—

"The morbid condition which constitutes consumption, and which results in the deposit of tubercle, is an exaggerated activity of that part of nutrition called destructive assimilation, by which more atoms of tissue are broken down, dissolved, and absorbed into the blood than can be expelled by the excreting organs, until the blood becomes so laden with the *débris* or *detritus* of the textures as to precipitate and deposit it in the form of tubercle in favorable situations."—p. 12.

Next as to treatment:—

"In a case determined to be sthenic phthisis, which resists what we have called the 'combined treatment' (opiates and purgatives, animal oils and emetics), aided and stimulated by change of air, or a short sea-voyage, our only resource, we repeat, is bloodletting; or, if the course of the disease is evidently too rapid to permit of success by the ordinary means, which require time, some more active measure, such as bloodletting, must be ventured upon; or thirdly, in a case in which spontaneous hæmoptysis has preceded the manifestation of the local disease,... its omission is inexcusable.....Venesection must cease to be a bugbear in the treatment of phthisis before general success will attend the treatment of consumption."—p. 302.

"Hence the need in asthenic phthisis of little besides the restoration of the vital energy of the tissues."—p. 373.

"The treatment of the mixed form of phthisis—of hereditary tuberculosis, excited or hastened by debilitating causes,.... consists, as might be expected, of a combination of tonics with the special remedies—cod-liver oil, opiate purgatives [*sic*], and in advanced stages, emetics."—p. 376.

The work luxuriates in an "Appendix," but wants an index.

Contributions to the Hygienic Treatment of Paralysis and of Paralytic Deformities. Illustrated by numerous Cases. With a short Sketch of Rational Medical Gymnastics, or the Movement Cure. With 38 Engravings. By M. Roth, M.D. pp. 98. London: Groombridge.

Dr. Roth herein makes many complaints of "orthodox and common routine practitioners, who condemn what is unknown to them, without taking the trouble to investigate it." If Dr. Roth chooses to ally himself with homœopaths and hydropaths, and to recommend *hypericum*, *ignatia*, *pulsatilla*—to find fault, as a matter of course, with Duchesne and Raymond, sneer at respectable practitioners in orthopædy, and vaunt his own exaggerated fancies as superior to the ideas of everybody else, he must take the consequences. Because the profession have refused to accept without inquiry the theories and practice of Ling, the Swedish phantasist, it was quite unnecessary that one of his ardent disciples, Dr. Roth, should abandon common sense and lose his temper, throw himself into the arms of the "globulists" and wet-sheet packers," and abuse the English profession of medicine.

Cure of the Sick, not Homœopathy, not Allopathy, but Judgment. By John Spurgin, M.D., F.R.C.P., &c., Senior Physician to the Foundling Hospital, and Honorary Physician to St. Mark's Hospital. pp. 91. London: Churchill.

The perusal of this offering has not been altogether without profit, as affording us a trumpet to sound in the ears of the recalcitrant maternity of the British islands—e. g.:

"As a 'physician for all,' I can assert that disorders of a destructively inflammatory type have actually set in. Let mothers of families, therefore, take heed to their quacking ways, for they are at the dangerous turn of their precipitous journey of life; the steps of death are at their quicker march, and the earth is opening in many places at once in reply to their heavy fall. Let mothers know that judgment is not committed to names, nor theories, nor specific practices, but holds all appliances ready for all necessities."—p. 69.

Take heed in time, then, mothers of the rising generation.

Foundation for a New Theory and Practice of Medicine. By Thomas Inman, M.D. Lond., M.R.C.P.L., Physician to the Liverpool Royal Infirmary, &c. pp. 374. London: Churchill.

Dr. Inman is a shrewd-thinking and pains-taking man; but, withal, somewhat failing in humility. There is much information in his new book, as well as plenty of refurbished platitudes. With his main dogma, however, *we* have much less fault to find than the majority of the "histological" school will no doubt accuse him of. This dogma is—

"That the theory and practice of medicine ought to be based upon alteration in power or vital *force* rather than on changes of *structure*."—p. 352.

Other important axioms are—first, that such alteration is always of a deteriorated, reduced, or depressed kind; secondly and consequently, that remedial measures should always be of a restorative, tonic, and stimulating character. But there is one question we are disposed to put to Dr. Inman before parting. It is this—Why is he so fond of talking about homœopathy? He first pets it, then abuses it; pets it again, and again casts it from him. "To the pure all things are pure;" and no doubt Dr. Inman does all this from the mere love of science, and the desire to exhibit the absurdities of charlatanry. But we are bound to tell him that pitch is sticky—very, and we would therefore advise him for the future to cease to meddle with it.

Ure's Dictionary of Arts, Manufactures, and Mines. New Edition, chiefly rewritten, and greatly enlarged. Edited by Robert Hunt, F.R.S., F.S.S., Keeper of Mining Records, &c. Illustrated with nearly 2000 Engravings on Wood. Parts I. to V. pp. 909. London: Longmans.

The first volume of this new issue of a very important work is now concluded, and embraces subjects as far on as "Cymophane." It would be mere supererogation to praise a book so well known and able as "Ure's Dictionary of Arts." It is a standard work, and should be in the library of every scientific man. We need but to add that the fresh contributors are men of the first position. We wish the new edition all success.

Journal de la Physiologie de l'Homme et des Animaux Publié sous la direction du Dr. Brown-Sequard. Tome III. No. IX. Paris: Masson. London: Baillière.

This journal, new firmly established throughout the scientific world, continues to increase in value as it advances in age and popularity. The present number contains thirteen original memoirs, including the remarkable paper of Robin and Magitot on the Genesis and Development of the Dental Follicles; Olliers's Further Researches on the Periosteum; three papers by the accomplished editor, Dr. Brown-Séquard, on the Physiology of parts of the Nervous System, worthy of the most distinguished neurologist of the age; and others by Gubler, Chauveau, Balbiani, &c. In the subsequent section of translated papers, extracts, of abridgments, and summaries, a complete view is afforded of the progress and physiological science throughout the world. We regret to see that England does not hold a very prominent place in the phalanx; but we may perhaps hope that now Dr. Brown-Séquard is domiciliated amongst us, he may find the means of developing more fully the English contributions to the science to which the journal promises ably to represent and notably to advance.

Gustaf von Düben's Treatise on Microscopical Diagnosis. With 71 Engravings. Translated, with additions, by Prof. Louis Bauer, M.D., M.R.C.S., Eng., &c. Pp. 82. New-York: Wiley. 1859.

Few Swedish professional publications have got into such general repute in so short a time as this excellent little tractate of Von Düben. There is such a union of simplicity and fulness about it as no doubt makes it an attractive book to the student. It is as useful as it is attractive, and, what is more, would be increased materially in both respects if, in future editions and translations, the woodcuts were of a superior and more delicate kind. Their coarseness in this American version is greatly to be regretted. Upon one or two points, additional information and illustration are yet desirable, as on "Catarrh of the Uriniferous Tubules" and "Bright's Disease." We recommend the work, however, as containing much information in a small compas.

Correspondence.

BLUNT URETHROTOME FOR STRICTURE OF THE URETHRA.

To the Editor of The Lancet.

Sir,—In your last number,* there is a description of what is supposed to be a new mode of effecting the internal incision of stricture, by Mr. Marshall. Its principle is the employment of a knife made sufficiently blunt as not to cut any part of the urethra through which it passes, excepting where it is opposed by the stricture, or where some force is required to pass it.

I took advantage of the last sexennial competition for the Argentuil prize in order to lay before its adjudicators—the French Academy of Medicine—the history of several improvements in the treatment of stricture and stone, which had been improperly published as their own by surgeons on both sides of the Channel. The Academy itself had saved me this trouble in respect to one of the principal of these—the direct or eccentric dilatation of stricture, instead of dilatation on the principle of the wedge; and they had deprived M. Perrève's stricture dilator (called in this country Mr. Holt's dilator) of the honor it had attained of being placed at the head of several improvements which had been submitted to them, on discovering that its principle had long before been explained, and its advantages insisted on, in my "Treatise on Stricture." In my brief competitive essay (which has since been published) other improvements were mentioned which had occurred to me since the publication of that treatise; and amongst these, at pages 22 and 24, I suggested the employment of a blunt knife in cases where incision is the appropriate practice. A sound is there described, having in one portion of it blunt cutting edges, of about an inch in length, and situated two or three inches from the point. The principle of its action is explained in the latter page; and at page 6 of the Introduction, another mode is suggested of carrying out the same principle—namely, by a sharp cutting edge, acting by pressure alone, and not in the manner of a saw.

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* Present No., p. 86.

I conceive that the principle of bluntness in cutting instruments is advantageously applicable to other operations in surgery, including the division of the stricture in strangulated hernia, and the incision of the prostate in lithotomy.

Of course Mr. Marshall had not read this prize essay, nor probably had he observed my allusion to this principle of bluntness of cutting instruments in one or more papers of which I have lately published on the present defective modes of removing stone from the bladder. As the practice of internal incision has come more into use since the hazard and inefficacy of external incision has become manifest, it is of importance that the safest plans of accomplishing it should be known. I fear that the recent improvements in the treatment of stone, or the substitution of dilatation for cutting, will be greatly impeded by the imperfect nature of the dilating instruments employed.

I am, Sir, your obedient servant,
JAMES ARNOTT, M.D.

York-street, Portman-square, June, 1860.

PIROGOFF'S OPERATION.

[LETTER FROM DR. EBEN WATSON.]

To the Editor of THE LANCET.

SIR,—In your last impression,* you make some remarks on the method of performing Pirogoff's operation "without disarticulation," and you assert that it was "first practised by Prof. Pirrie, of Aberdeen, and *dwelt upon* by Dr. Eben Watson in his Clinical Remarks." Again, you speak of the advantages of this operation "as set forth by Professor Pirrie."

Now, I think these statements are not quite correct. I made the proposal of the modification above alluded to as an original proposal. I never knew of Prof. Pirrie's having even performed the operation in that way until the letter of Dr. Martin appeared in your journal. Dr. Martin said he had *seen* Prof. Pirrie perform it so; but it is quite obvious that Dr. Martin may have been mistaken, and, *even if he had not*, his statement did not detract from my claim of originality. How could I know what Prof. Pirrie had done in Aberdeen, where I have never been in my life? But if Prof. Pirrie has published on the subject prior to the appearance of my paper in your columns, that alters the matter entirely. He then will be entitled to the claim of originality, and I shall at once yield it to him. You say in your remarks that the advantages of this new operation have been "set forth by Prof. Pirrie." I understand that to mean that he has done so in some of the public journals. You, however, make no reference to any of them, and I therefore write to ask you still to do so, or to explain why you have written as above quoted.

Your obedient servant,
EBEN WATSON, M.D.

Glasgow, May, 1860.

*** Our remarks on the subject of performing either Syme's or Pirogoff's amputation "without disarticulation" were founded upon Prof. Pirrie's "Principles and Practice of Surgery," published in 1852. His practice in this respect has been known to the profession for many years, and understood to apply to either of the operations in question.—ED. L.

COMPLICATED INJURIES ABOUT THE SHOULDER-JOINT.

To the Editor of THE LANCET.

SIR,—I beg to make a few remarks on the following paragraph in your last p. 369 *:—

"A case of more than usual interest occurred to me lately in the person of a man, aged sixty, in Abernethy ward, who had sustained an injury to the shoulder three weeks prior to his admission. The head of the humerus was obviously thrown from its socket, and the flattening of the shoulder was unusually great. The deltoid was tight, and the elbow was drawn from the side. The arm was lengthened by one inch. The head of the bone rotated with the shaft; the coracoid process was unbroken, but there was distinct crepitus on moving the arm. The man was very positive in his assurance that the injury was caused by a direct fall on the shoulder. I made an attempt to reduce the dislocation, under chloroform, by the aid of pulleys. I brought the bone towards its natural relation to the acromion process, by extension downwards, with a padded fulcrum in the axilla. The natural rotundity of the shoulder was restored during the extension, but on its remission it disappeared. On the second day following, I repeated the attempt, more critically, persevering in the extension for nearly half an hour, but with no better success. While under extension the head of the bone became prominent, but returned to its abormal position on remitting the extending force."

Now, Sir, there is a form of injury of the shoulder commonly recognised by surgical writers, the distinctive characters of which the younger branches of our profession, especially those presenting themselves before examining boards, are expected to know. It is described as "Fracture of the Neck of the Scapula outside the Capsule." The symptoms of this injury so closely correspond with those described by Mr. Skey in the case just referred to, that I very much question whether it was not the same. If it were not, it must be highly important to be able to distinguish the one from the other, in consequence of this great practical fact: restoration of the head of the humerus to the glenoid cavity in the one case need not be attempted, for this obvious reason, it has not left that cavity. The separated portion of scapula is retained in apposition with the humerus by the long head of the biceps and triceps muscles, and by the capsule of the joint, and they are thus dislocated into the axilla.

I conceive it would have been highly useful had Mr. Skey given us some positive signs by which to distinguish these two very analogous forms of injury, as it were manifestly absurd to repeat attempts to restore the head of the humerus to the glenoid cavity the two being at the same time in apposition.

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* Present No, page 44.

* Present Number, page 26.

The subject being one of great practical interest, I beg it may be submitted to discussion in your columns.

I am, Sir, your obedient servant,
Charles D. Arnott, M. D.

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THE CASE OF CÆSAREAN SECTION AT PRESTON.

To the Editor of The Lancet.

Sir,—In connexion with this case,* it may be useful to know what was done about thirty years ago in a case of malacosteon occurring in the practice of Dr. Dick, of this place.

The woman was about forty years of age, and the mother of a family. A considerable period had elapsed since her last parturition, and during this time she had fallen into bad health, with malacosteon as the result. I have no knowledge of the actual measurements of the pelvis, nor do I know the amount of deformity at the pelvic brim, but the distortion at the outlet was so great that the perforator could not be used. Two neighboring practitioners were called in, one of whom (the late Dr. Liddell, of Carnwath,) simply separated the ischia asunder by sheer strength of arm, used the perforator, and effected delivery. The woman recovered well.

The bearing of this on the Preston case may not be very evident. But *had the inlet been eight lines wider, or a little more*, and the ischia torn asunder, there might have been propriety in attempting embryulcia, in lieu of the Cæsarean section.

I am, Sir, your obedient servant,
Walter Watson, M.D.

Broombank, Midcalder, June, 1860.

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MR. J. ADAMS'S CASE OF FEMORAL HERNIA.

To the Editor of The Lancet.

Sir,—In the last number of your journal "A case of Femoral Hernia, which had descended beneath the Pectineal Portion of the Fascia Lata," &c., is related, under the head of the proceedings of the Royal Medical and Chirurgical Society.† The case was read in *extenso* on the 17th of March, and the abstract was supplied by me, according to custom, for publication in The Lancet. I was prevented by severe indisposition from attending the Society, when the case was read. I much deplore this, because I should have been able to convince Mr. Fergusson that there was no unwillingness on my part to perform an operation, as he insinuates. I carefully examined the groin from day to day in company with the house-surgeon, and, on one or two occasions, in the presence of one of my colleagues, to ascertain if there was any swelling, or any other condition which would justify an explorative operation. Nothing of the sort could be detected until the fifth day after the patient's admission. At this time a slight fulness was felt by me, and I therefore made the examination referred to. My opinion is, that the slight tumefaction became apparent only when suppuration occurred in the sac, and that it did not exist before, or it would not have escaped the observation of all who examined the case. I can assure Mr. Fergusson that I have no dread of early operations in hernia; and I agree with him that, if the operation had been performed earlier, the patient's life might possibly have been saved. This reflection, however, is not very consoling to one's mind; and I confess I am somewhat surprised that so trite an observation, carrying with it a most mortifying reflection, should have emanated from so high an authority. The true interest in the case, in my opinion, depends on the peculiar position of the hernia; for, as far as my reading enables me to judge, it is in this respect unique.

There are two slight inaccuracies in the printing of my abstract which are not unimportant. Thus the fascia covering the hernia was *in*elastic, and there was an *un*usual development of the inner fibres of the pectineus muscle, which covered the swelling.

I am, Sir, your obedient servant,
John Adams, F.R.C.S.

St. Helen's-place, May, 1860.

Obituary.

ANDREAS RETZIUS.

The Stockholm *Aftonbladet* for April announces the decease of this great physiologist. Andreas Retzius, Professor of Anatomy and Physiology at the Royal Caroline Institute, expired on the 18th of April, after a few days' sickness, at the age of sixty-four. Sweden has lost in him one of its most honored men. The pupil of Florman and Abildgard, and, in subsequent years, the intimate friend of Johannes Müller, he combined all the merits of the elder school with all the prerogatives of the new. As an investigator, he had the good fortune of seeing all his numerous discoveries, included in the system of science, and as a teacher few equalled him in the fervent interest with which he watched over the progress of his pupils, and in the bold, clear, vivid originality of his instruction and diction. He was one of those great workers on the soil of science who had acquired European fame. His comprehensive intellect embraced all subjects, however varied, that tended to the common good, and his assistance and co-operation were ever ready when the object was to force through all prejudices to make way for light and truth. Few amongst his contemporaries who lived and worked for the public good could be found who were not stimulated in their career of activity by the animatory contact with Andreas Retzius. In social life he was universally beloved. Warm in friendship, charitable in science, free from all selfishness and idle vanity, his memory will be long held amongst us in loving and grateful remembrance. Professor Andreas Retzius, was the son of Professor Retzius of Lund. He was born in 1796, became a student in 1812, and took his merit degree in 1819; afterwards became a teacher at the Veterinary Institution in Stockholm, and founded an anatomical museum there; undertook a scientific voyage to Norway, and later to Lapland, Germany, England, Ireland, and France; was appointed lecturer on anatomy at the Caroline Institution, and inspector in 1830. In 1826, he became a member of the Academy of Sciences. In 1832 he founded, in connexion with other men of science, a medical gazette; and in 1839 was named professor of anatomy, in connexion with painting, at the Royal Academy of Arts. As an author, he was very productive. The titles alone of his scientific works fill three closely-printed pages in the "Biographical Dictionary."

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* Present No., page 29.

† Present No., page 58.

THE LAST HOURS OF ALBERT SMITH.

UNTIL nine years of age, Albert Smith was so delicate and of so fragile an appearance, that he was nicknamed by a friend "Little China." After this time, however, he became strong and so healthy, that to use a common expression—probably more true in his case than in many others to whom it has been applied—he knew not what a days's illness was until December last.

On the 22d of December, after giving his entertainment as usual at the Egyptian Hall, he returned home, and occupied himself till one o'clock in the morning by hanging pictures in a new room. He retired to rest without complaint of any kind. Early in the morning of the 23rd, he had a convulsive seizure while asleep, and from this he passed into a state of profound coma with stertorous breathing; rousing from this coma after nearly an hour's interval, he became violently excited in manner, but was unable to speak. The period of excitement lasted for twenty minutes, and was followed by another fit, this by coma, and again by violent excitement. He was bled freely by his medical attendant, Dr. Ree, the back of the neck was blistered, sinapisms applied to the feet and legs; but the severity of the convulsions, coma, and excitement continued until two o'clock P.M., the patient passing through a series of them, about eight in the hour. After taking Indian hemp, the convulsions ceased, the excitement diminished, but, with the exception of two or three words, the power of articulation was lost. There was no paralysis of either face or limbs; there was no albuminuria. Sleep followed in the evening, and about midday on the 24th the faculty of speech returned, and from this time there was rapid amendment. Within a few days his repeated expression was, "I never felt better in my life; I am only surprised that I have not lost strength."

On Friday, the 11th of May, Mr. Smith was exposed to wet, and suffered in the evening from "cold."

On the 12th, he was again more severely exposed, getting "wet through," and did not change his clothes for three hours; and on the evening of this day he coughed much, and felt weak. On the Sunday he rested; but on Monday resumed his duties at the Hall. He felt weak, wheezed in his breathing, could scarcely lie down at night, lost all appetite, but continued his avocations daily and nightly until Saturday afternoon, May 19th, and until that time had no medical advice. On Saturday he was seen by Dr. Ree, who found generally diffused bronchitis, with dulness on percussion at the base of the right lung posteriorly, and fine crepitation in the same locality. The pulse was laboured, not more than 86 per minute. The obstruction to the respiration was great. The expectoration, very little of which was raised, was sanguinolent; the face pallid; the tongue extremely foul, and breath very offensive. Cupping-glasses were very freely applied to the back of the chest, and blisters were raised by strong acetum cantharidis; at the same time a mixture of squills, nitric ether, and ammonia was given every four or five hours.

Delirium supervened on the night of Saturday, but on Sunday there was slight relief to the respiration. The stomach now rejected everything, and continued to do so until Monday, the 21st. On this day the patient resolved to get up and attempt his performance at the Egyptian Hall, and in the afternoon dressed himself for this purpose. He was persuaded to relinquish the idea, and was seen in consultation by Dr. Reynolds and Dr. Ree. The vomiting had now ceased, after taking a dose of a mixture containing a small quantity of dilute hydrocyanic acid. The bronchitis was general throughout the whole of the thorax, on either side, and both above and below there was fine mucous and subcrepitant rhonchus. Expiration was extremely prolonged. In the left subclavicular region, where there was slight pain, friction sound was audible. The base of the right lung was dull on percussion, and except when a strong effort at respiration was made, was silent, no air appearing to find entrance. The pulse was labored, and only 80 per minute; the surface cool, the face pallid, the tongue very foul, and the bowels confined. There had been no sleep for several nights. Complained of prostration. From several causes, no examination of the urine could be obtained. The chest was enveloped in spongio-piline wrung out of hot water; and at night, calomel, colocynth, and opium were given; beef-tea, sherry, and Seltzer water were taken freely and *ad libitum*.

Tuesday, May 22nd.—Nine A.M.: Some sleep in the night, but much wandering; condition of chest much the same as at last report, but air appears to enter rather more freely; complains of great prostration, but says his breathing is easier; the pulse is slow and laborious; the surface dusky; no headache; no pain. Ammonia and decoction of bark, with tincture of squills, were ordered to be taken every four hours; and brandy, beef-tea, and wine with beaten eggs, were given and taken freely.

In the afternoon, at six o'clock, he was seen by Dr. Burrows, Dr. Reynolds, and Dr. Ree. By this time the bowels had acted very freely; the chest condition was the same as in the morning, but there was less feeling of prostration, and the aspect was somewhat improved. Another blister was ordered to the right side, the mixture was to be continued, and calomel and opium to be given every six hours.

At eleven P.M. he was again seen by Dr. Ree, when he was about the same; and, in answer to a question, said, "I feel no pain whatever, and nothing else but extreme weakness." He was ordered to continue the use of the medicine, the stimulants, and nourishment.

At five o'clock on the following morning, Dr. Ree was summoned in great haste, and found the patient much prostrated, bordering on collapse. Hot-water bottles had been applied to the feet and legs, and brandy with eggs and strong coffee were freely administered, under the influence of which the pulse got up, the surface became warm, and he was able to answer several questions. At this time (half-past seven), although it was painfully evident the poor invalid could not last long, there was no sign of rapid dissolution, and Dr. Ree left, under a promise to return in an hour; but within that time an urgent message called him again to the house, too late, however, to see his patient alive; he had just breathed his last.

T. W. G. STONE, ESQ., M.R.C.S.

Our readers will hear with regret of the death of Mr. Stone, eldest son of T. M. Stone, Esq., of the Royal College of Surgeons. The deceased, who was a highly promising young man, was only twenty-two years of age, and was educated at the Greenwich Proprietary School. He received his medical education at St. Bartholomew's Hospital. His father obtained for him an appointment in the Army Medical Department, which he resigned in order to devote himself to the medical profession. In the short space of three years, by dint of hard study and perseverance, he qualified himself so as to pass with honor the examination of the Royal College of Surgeons, from which he obtained both the diploma of membership and midwifery. He then commenced a course of study for fellowship, and had passed his examinations in classics, mathematics, and French, when he was seized with the illness which unfortunately proved fatal. During his illness he received the unremitting kindness and attention of Mr. Holden, and Mr. Wormald, of St. Bartholomew's Hospital, and of Dr. Wilkinson, of Sydenham; and it deserves to be mentioned to the honor of Sir Benjamin Brodie, that when informed of Mr. Stone's anxious wish for his advice as to the state of his son, he at once, although suffering from a severe attack of gout, came to see him, and confirmed the unfavorable opinions of the medical gentlemen in attendance on him. His disease was lumbar abscess: one abscess had been opened, another burst into the intestines, a third into the rectum, and three days before his death, a fourth burst externally. His agony was excessive, but he bore it with great courage. He expired on Tuesday, the 13th inst., deeply regretted by all who had the pleasure of knowing him; and was interred on the 20th inst. at Nunhead Cemetery.

JOHN HOBBS, ESQ., F.R.C.S.

By the death of this respected surgeon on the 17th ult., the science of phrenology has lost one of its most quiet and unostentatious supporters. Possessed of a select and well-chosen collection of casts of living and dead celebrities, he, with a few friends, during a period of more than three years, carefully examined the whole subject, and became convinced of its entire truthfulness to nature. The deaths of two of these surgeons at the early age of forty are noticed in Vols. 15 and 19 of the *Phrenological Journal*. His own, as he had nearly completed his fifty-fifth year, is recorded here. He became the apprentice of Mr. Sawrey, of Bloomsbury-square, completed his studies at St. Bartholomew's Hospital under Abernethy and Lawrence, became a member of the Royal College of Surgeons in 1829, and was eventually selected a fellow under its Charter in 1843. After a year's study in Paris, he settled in Practice in Scuthampton-row, Russell-square, where he continuously resided, with a change of houses on marrying in 1839. Possessed of competence, eminently painstaking, thoughtful and reflective, quaint in speech, and retiring in manners, he practised a profession, which he loved for its own sake, with the entire confidence of the select and trusting circle in which he lived, and with the respect of his professional brethren around him. He leaves a widow and two daughters to deplore his sudden and unexpected death, which took place from syncope and effusion into the right side of the pleura.

JAMES GREGORY VOS, M.D.

This gentleman died at Southampton on the 28th ultimo. He had passed through a most arduous and successful career of twenty-seven years as a physician at Calcutta, where he was universally esteemed and beloved by all who knew him. About the middle of February last he was seized with dysentery, and was obliged suddenly to give up his practice about seven weeks ago in order to repair to England, as the only way left open to him to escape from the sad ravages which the disease was making upon his constitution. He arrived at Southampton, in a dreadfully debilitated and emaciated condition, on the 20th of April, and immediately placed himself under the care of Dr. Wiblin, who was in constant attendance upon him until the fatal termination of the disease.

In gentlemanly deportment, kindness of heart, and unflinching professional integrity, Dr. Vos was most exemplary.

JOSEPH HEWER, ESQ., M.R.C.S.

At Denmark-hill, on the 17th inst., Joseph Hewer Esq., M.R.C.S., late of Chobham, where he had resided thirty years. His great moral worth, his ingenuous and unselfish warmth of character, and his universal Christian benevolence, had secured for him the esteem and friendship of all classes of people in his neighborhood. The poor of the heaths about Chobham, Windlesham, Bagshot, and Woking will lose in him a conscientious and skillful medical practitioner and a wise counsellor; those who are wealthier and occupying a higher position in Society, by whom he was regarded with great respect, not only for his professional ability, but for his many estimable qualities, will have to deplore the loss of a most kind neighbor, and a very sincere friend. Mr. Hewer is succeeded in his practice by his son-in-law.

PARISIAN MEDICAL INTELLIGENCE.

(FROM OUR OWN CORRESPONDENT.)

The proceedings of the Academy of Medicine were commenced on May 29th by M. Depaul's termination of the interesting paper, begun at the previous meeting, upon Occlusion of the Os Uteri during Pregnancy necessitating the Use of the Bistoury in order to effect Delivery. A striking feature present in all the three cases detailed was the completeness of the obliteration of the uterine outlet, and also the solidity of the cohesion between the parts. Neither could the smallest trace of the os be detected by the finger, nor did the most powerful uterine efforts, though continued for many consecutive hours, in any way tend to re-establish the normal state of things.

After the reading of this communication, M. Velpeau rose; but as previous notice had been given by M. Blache, physician to the Hôpital des Enfans, of an intention to bring forward a claim of priority in favor of Delau over M. Bize, of Montélemart, in the administration of Perchloride of iron in purpura hæmorrhagica, that surgeon waived his right in M. Blache's favor. This latter gentleman stated that several years ago, at the suggestion of M. Delau, he undertook a series of experiments with this remedy, all more or less confirming the successful results detailed in M. Bize's essay. The statement called forth a reply from the reporter of the committee, M. Devergie, in which he maintained that a full investigation of the question of priority had been instituted, and that though M. Delau seems to have been the first to turn his attention to the subject, yet as M. Bize had been the first to *publish* his experiment, the palm must remain in his possessien—on the principle, I suppose, of "*Palmam qui (non) meruit ferat.*"

Much time having been frittered away in this tiresome and bootless discussion about priority, it was late when M. Trousseau rose to reply to some of the charges made in M. Devergie's report on the influence of the perchloride of iron, against the partizans of the vitalist or dynamist theory of the mode of action of iron on the economy. The learned professor said that the reporter had treated two questions in his critique: one, the action of the drug; the other, a question, and a most important one, of general therapeutics. As regarded the action of the drug in purpura hæmorrhagica, he did not consider that the cases were sufficient to prove its curative power, and he believed that medical men would be disappointed if they adopted its use and relied upon speedy and certain results. He extolled its merits as a topical hæmostatic, but said that the theory of the *chemical* action of the perchloride was absurd; that its administration in hæmorrhage from the lungs or womb was beyond measure ridiculous; and, in a clever bantering way, followed the course of a supposed dose through the system, from its administration from the mouth to its ultimate distribution, or rather diffusion, amongst all the capillaries of the body, and dwelt upon the improbability of its having reserved the employment of its styptic power until its arrival at the required destination. The sedative effects noted by the author of the paper, M. Trousseau attributed to the cessation of reaction from natural causes, foreign to the action of the remedy administered, and said that he did not believe that any drug possessed both a styptic and at the same time a sedative power. Diverging now into the general question of the mode of action of ferruginous preparations on the system, the professor argued with much power against the views of the chemical theorists, who maintain that iron, when taken, is absorbed directly into the blood and there precipitated as an oxide, and that it restores to that fluid the amount of material necessary for the reconstitution of its globules. By citing the experiments of M. Reveil, who found that in chlorosis the administration of iron, although followed by rapid increase in the quantity of blood-globules, produced no increase in the amount of that mineral in this fluid, M. Trousseau introduced his own theory concerning its therapeutical action,—namely, that of excitation. In chlorosis, where the effects of the iron are best seen, there is no lack of it in the system, but as the globules are few, it is condensed, not diminished; and the special property of the ferruginous compounds is to produce distribution by stimulating the system, and exciting the re-formation of the globular ingredient of the blood.

Here the meeting was adjourned till the 5th June.

I was at the Hôpital de la Charité this morning June 4th), and I find that M. Piorry has authorized a medical gentleman, of the name of Guirette, from Lyons, to institute in his wards a series of experiments in order to test the value of a new plan proposed by the said Dr. Guirette, *for the radical cure of phthisis pulmonalis*, during its third or suppurative stage.

Such a proposition, at first sight, is unpromising, and especially at the Charité, whose wards are still echoing with the cruel humbugs and deceptive professions of the Docteur Noir; nevertheless I am disposed to think M. Piorry quite justified in giving the present scheme a fair trial. The method of treatment consists in the establishment of a fistulous opening through the integuments of the thorax and the pleura into the lung at its diseased part, and in the free admission of atmospheric air into the cavity of the abscess, which at the same time discharges its contents externally. Dr. Guirette was led to believe in the feasibility of such a plan by a pure accident. Having at the hospital at Lyons applied an issue to the chest of a phthisical patient, over the site of a cavity, and having inserted a pea in order to keep up the counter-irritation, this practitioner found that the foreign body had worked its way into the lung, and caused the pus contained in the abscess, which was a very superficial one, to escape at the artificial opening. The result so far from being fatal to the patient, was so beneficial as to lead to complete recovery. He left the hospital apparently cured, and emigrated to Rio Janeiro.

Since the occurrence of this case, Dr. Guirette has applied the penetrating cautery in three instances, and each time with the best success. Encouraged by this experience, he has come to Paris to submit his plan to public criticism; and although he has met with many rebuffs, is now enabled, by the kindness of M. Piorry, to plead his own cause, or rather that of his new system of treatment of this most incurable complaint. Operations have been already commenced; and a lad aged about eighteen years, with all the symptoms of an abscess under the left clavicle, has been handed over to Dr. Guirette, who applied, on the third inst., a cautery of Vienna paste in the third intercostal space, towards the axilla. This, when the eschar falls, will be replaced by a pea attached to a thread of silk. I shall report progress in my next.

The following are a few of the practical truths insisted on by M. Desmarres, in his clinical remarks on the results of his experience in ophthalmic medicine, and are worth mentioning:—

1. When you see, in an obstinate case of conjunctivitis, an elongated clot or streak of mucous adhering to the surface of the eye or lid, be sure that the irritation is due to an eyelash growing out of its natural direction.

2. In a case of monocular palpebral conjunctivitis, the disturbance of the circulation is very often due to an obstruction of some portion of the lachrymal apparatus. Always assure yourself, in these affections, of the permeability of the duct, by means of an injection with Anel's syringe.

3. Never apply nitrate of silver to a recently-prolapsed iris; it often causes the most violent inflammation.

4. After applying nitrate of silver to an eye, whether in solid or liquid form, neutralize the excess by means of a solution of common salt, which forms an insoluble chloride.

5. Never operate for cataract without first seeing if the phosphenes exist, or if there be sugar in the urine. In the first case, the operation is useless; in the last, most dangerous, for the corneal flap is nearly sure to slough.

6. If a patient with dim sight complains of an iridescent halo round the candle, you may prognosticate a glaucoma.

Paris, June, 1860.

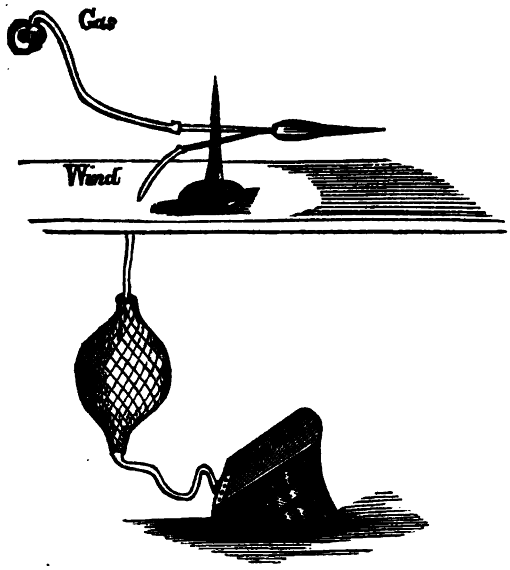
New Inventions

IN AID OF THE

PRACTICE OF MEDICINE AND SURGERY.

NEW BLOW-PIPE.

Mr. Lewis J. Paine, of great Russell-street, Bloomsbury, late exhibited to the members of the Medical Society of London a valuable improvement in the blow-pipe. It consists of a shifting nozzle, by which air and gas are brought into contact by means of an arrangement of india-rubber tubes in connexion with a diaphragm, as he terms it—a compressible bag which is supplied with air by a pair of small bellows, laid upon the floor, and worked by the foot.



This simple and ingenious instrument, although small, is capable of great exertion. In the laboratory of the chemist, or in the study of the mineralogist or geologist, it is invaluable, for by its instrumentality the most refractory minerals or metals may be accurately tested. Indeed, with some very slight modification of the blow-pipe portion of it, a very powerful miniature furnace may be formed, capable of reducing from four to eight ounces of metal, such as gold, silver, copper, &c.; so that this little wind instrument recommends itself alike to the chemist, minerologist, dentist, or indeed anyone whose natural bellows is not sufficiently strong to assist him in carrying out those experiments in which concentration of heat is the active agent.

News Items, Medical Facts, &c.

Relation of the Medical Profession to the Public.—At a late meeting of the Royal Institution, Dr. Mayo delivered a lecture "On the Relations of the Public to the Science and Practice of Medicine." He alluded to an antagonistic feeling existing between medical men and a portion of the public, in consequence of which medical aid is often not applied for until it is too late. He recommended an alteration of the existing system, which tends to produce dissatisfaction and mutual distrust, and the adoption of a mode of practice that would place the public and the medical profession on terms of friendship. Dr. Mayo then strongly urged the propriety of a wider study of physiology as a branch of general education, and adverted favorably to the fitness of women to practice medicine. Touching on the subject of insanity, Dr. Mayo condemned the present system, which gives an arbitrary power of confinement to any two medical practitioners, who may or may not be competent to form an opinion as to insanity.

Trial for Abortion.—The Queen v. White and Others.—Mr. Kennedy applied on Tuesday last, at the Court of Queen's Bench, in this case, for a rule to show cause why the Coroner's proceedings (the latter of two inquisitions) should not be quashed. The two prisoners were White, a chemist at Birmingham, and a Mrs. Fisher, with whom a female had lodged for six or seven weeks; and, after taking certain medicines and undergoing operations at the hands of White, died. At a first inquest, a verdict of "Natural Death" was returned; at a second, one of "Wilful Murder" against the prisoners. It was contended that the Coroner had acted wrongly in taking the evidence, on the second occasion, of a witness who had been present and not examined on the first, and on whose statement the case turned. This important application was adjourned to search for precedents.

A Bribe.—A "Homœopath" writes to the morning papers stating that in answer to the appeals of various hospitals for further funds, he has addressed an offer to St. Mary's, St. George's, Middlesex, and the University hospitals, for contributing £3000 to the expense of certain wards during three years, on condition that homœopathic treatment should be adopted for the patients, and a public "trial" made of homœopathy. He does not understand that this is a bribe offered to lull the consciences of men who refuse to tamper with the lives of the patients entrusted to their care, but laments the obstinacy which rejects his dangerous liberality.

Longevity.—Beauly v. Roseneath.—A correspondent writes:—"It being questioned in reference to Roseneath whether any Highland parish could produce four living persons whose united ages amount to 370 years, I have to state that there are alive in the parish of Kilmorack three females and one male whose united ages amount to 375 years, being respectively 99, 94, 91, 91. The two eldest are widows, the others a widower and a spinster. This gives an average of 1 1-4th above Roseneath. It cannot be vouched for that these four are the eldest in the parish, and lately much higher figures could be brought forward, as no doubt many other Highland parishes can at present."—*Inverness Advertiser.*

Man-eating Tigers.—Since January, 1859, 1,500 Chinese have been carried off by tigers in Johore, the end of the Malacca peninsula. It is now difficult to induce Coolies to work in Johore.

Influence of Slow Lead-Poisoning on the Product of Conception.—M. C. Paul, resident physician to a Paris hospital, has collectod 81 cases showing the baneful influence of lead. His attention was attracted to the subject by the case of a woman who had given birth to three healthy children before she took to the occupation of printing-type cleaning, and who out of ten subsequent gestations had had eight miscarriages. One child, which was born at full time, died at five months. The 81 cases refer mostly to women, only a few relating to men. From these cases, M. Paul thinks himself justified in supposing that lead-poisoning has not only the already well-known-effects, but that it also causes the death of the fœtus, or the premature decease of the child, whether either the father or mother has been exposed to lead-poisoning. Out of the 123 gestations included in the 81 cases, 64 abortions, 4 premature labours, and 5 still-births were noted. It was, moreover, observed that 20 children, born at full time, died within their first year, 8 within their second, 7 within their third, and one only at a later period. 14 children are now alive, 10 of whom are above three years old. Metrorrhagia occurred in 15 cases, the loss of blood depending, very probably, on abortions.—*Gazette des Hopitaux.*

The Dietetic Inventiveness of Hunger.—Captain Marcy, in his interesting work, "The Prairie Traveller," supplied several facts not without importance in a physiological and medical aspect. Indeed, under the hardships and privations which fall to the lot of travellers beyond the tracks of civilized life, man and the inferior animals are frequently made the subjects of experiments, which cannot be instituted in our schools and hospitals. Captain Marcy thus describes what befell his party when passing over the Rocky Mountains during the winter of 1857–8:—"Our supplies of provisions were entirely consumed eighteen days before reaching the settlements in New Mexico, and we were obliged to resort to a variety of expedients to supply the deficiency. Our poor mules were fast falling and dropping down from exhaustion in the deep snows, and our only dependence for the means of sustaining life was upon these starved animals as they became unserviceable. We had no salt, sugar, coffee, or tobacco, which, at a time when men are performing the severest labor that the human system is capable of enduring, was a great privation. In this destitute condition we found a substitute for tobacco in the bark of the red willow, which grows upon many of the mountain streams in that vicinity. The outer bark is first removed with a knife, after which the inner bark is scraped up into ridges around the sticks, and held in the fire until it is thoroughly roasted, when it is taken off the stick, pulverized in the hand and is ready for smoking. It has the narcotic properties of tobacco, and is quite agreeable to the taste and smell. The sumach leaf is also used by the Indians in the same way, and has a similar taste to the willow bark. A decoction of the dried wild or horse mint, which we found abundant under the snow, was quite palatable, and answered instead of coffee. It dries up in that climate, but does not lose its flavor. We suffered greatly from the want of salt; but by burning the outside of our mule-steaks, and sprinkling a little gun-powder upon them, it did not require a very extensive stretch of the imagination to fancy the presence of both salt and pepper. (There can be no doubt that the nitre and charcoal would to a great extent supply the want of salt. Soldiers and huntsmen have long resorted to this use of gunpowder under emergencies.) We tried the flesh of horse, colt, and mule, all of which were in a starved condition, and of course not very tender, juicy, or nutritious. We consumed the enormous amount of from five to six pounds of this meat per man daily; but continued to grow weak and thin, until, at the end of twelve days, we were able to perform but little labor, and were continually craving for fat meat."

The Sphygmographer, or Register of the Arterial Pulse.—M. Marey has published, in the *Gazette Medicale*, an article wherein he describes an improvement on Vierordt's arterial register. The French instrument also acts by a lever, but is lighter and of easier practical application. It can only indicate the frequency or the more or less regularity of the pulse. It may be doubted whether these instruments, though very ingenious, will ever prove actually useful in practice.

Rasorian Doses of Tartar Emetic in Tetanus.—Dr. Cornaz relates, in *L'Echo Medical Suisse* of the 1st inst., two cases of tetanus in which repeated doses of tartar emetic were given. One of the patients, aged sixty-three, whose primary lesion was mortification of a finger, recovered; the other, aged forty-one, who had had two fingers crushed, sank under the tetanic attacks. The doses of tartar emetic were, in both cases, half a grain every half-hour; these produced rather abundant alvine evacuations, but not very severe vomiting. Both patients had, however, large doses of morphine and chlorate of potash, with warm baths. When the emetic acted too powerfully on the intestinal canal, the administration of the salt was suspended for several hours.

Drowning in a Water Bed.—On Monday last an inquest was held at the County Lunatic Asylum, Colney Hatch, on the body of Martha Draper, one of the patients, she having been accidentally drowned in consequence of the bursting of a water bed.

Dissecting Wounds.—M. Ch. Phillips, a surgeon well known in Paris by very successful labors in urinary pathology and practice, has been in a very precarious state from a dissecting wound, but is now recovering.

A New Military Hospital in Paris.—The Minister of War has lately decided that a military hospital shall be established in the northern part of Paris. The principal hospital of the kind, called Val de Grace, is situated, as is wel known, on the left or southern side of the Seine. It has been proposed to use the Hospital for Incurables for the purpose, and to transfer the patients of the latter institution into a new building to be erected outside the fortifications. Another part of the project is to place all the hospitals in which very chronic or incurable cases are received beyond the fortified line. What is to become of the patients in the event of a seige?

Cephalotripsy without Traction versus the Cæsarean Operation.—M. Pajot, professor of clinical obstetricy at the Paris Faculty, has just substituted the former for the latter operation, in a case where, from rickets, the antero-posterior diameter measured but one inch and two-thirds. M. Pajot considers that the danger of cephalotripsy consists in the tractions which are generally made after the head is broken up, as points of bone easily tear the soft parts of the mother. He is in the habit of crushing as completely as possible, and then leaving the uterus to expel the fœtus by its contractions. This method is even carried out as regards the body of the child. In the present case the success was complete.

Mortality in the Russian Capitals.—At St. Petersburg, the number of births in 1858 amounted to 17,658 (9147 boys, and 8511 girls), while the deaths were 19,077. This fact, which occurs every year, demonstrates that, as the deaths exceed the births, the population of that city is only kept up by immigration. The number of illegitimate births increases, while marriages are diminishing. At Moscow, the number of births was 11,267 (5822 boys, and 5445 girls), and that of deaths, 11,703.

Medicines of the Shetlanders.—Their popular recipes are scurvy-grass for cutaneous complaints, butter-milk for dropsy, shells of whelks calcined and pounded for dyspepsia, and a variety of steatite for excoriations.

PRINTED AND PUBLISHED
By JAMES HERALD, 24 Ann Street,
NEW YORK.

THE LANCET.

Journal of Medical, Surgical and Chemical Science and Practice, Criticism, Literature and News.

MR. WAKLEY, M.P. EDITOR. J. HENRY BENNET, M.D., J. WAKLEY, JR. SUB-EDITORS.

IN TWO VOLUMES ANNUALLY.

VOL. 2. NEW YORK, AUGUST, 1860. No. 2.

LECTURES ON FEVERS

BEING

The Lumleian Lectures,

DELIVERED BEFORE THE

ROYAL COLLEGE OF PHYSICIANS OF LONDON, 1858–59;

COMPRISING

A DESCRIPTION OF THE DISTINCTIVE CHARACTERS, PATHOLOGY, AND TREATMENT

OF

THE SEVERAL FORMS

OF

CONTINUED FEVER.

BY

ALEXANDER TWEEDIE, M.D., F.R.S.,

Fellow of the Royal College of Physicians, Physician to the London Fever Hospital, to the Foundling Hospital, Examiner in Medicine in the University of London,
etc. etc.

LECTURE X.

MORTALITY OF CONTINUED FEVER.

Mortality of continued fever of all forms—tables of mortality of each form—mortality in different years—mortality of enteric fever—of typhus fever—of relapsing fever—influence of age on the mortality of fever—general deductions—change-of-type theory—prophylaxis of fevers.

THE mortality of fevers is an exceedingly interesting subject of inquiry, and although we possess statistical data in abundance to enable us to form correct conclusions as to the mortality of continued fevers, *as a class*, the death-rate of the individual forms has not, till very recently, been satisfactorily deduced, in consequence of the several types having been considered one and the same disease. But as each form comes to be more generally recognised, we shall not only arrive at more certain conclusions as to its mortality, but obtain much valuable information on many points which are as yet involved in obscurity.

Continued fevers have caused at times an incredible sacrifice of human life. You may remember that I stated, in my first lecture, that according to reports of the famine fever which raged in Ireland in 1817–19 returned to the Government, at least 65,000 individuals were destroyed by it in less than two years. The mortality varies according to certain circumstances; for example, it differs not only according to the form or type of the disease, but the death-rate of the same form varies in different years and in different places. Age, or period of life, too, has an important influence on the mortality. These propositions will be illustrated as we proceed.

Perhaps the most reliable information on the death-rate of fevers is the experience of the different hospitals; and I shall not, I hope, be accused of predilection in stating that the experience afforded by the records of the London Fever Hospital is exceedingly valuable in a statistical point of view, not more from the extensive field of inquiry than from the accuracy with which the cases are recorded, and the care with which the several forms of fever have for the last fifteen years been distinguished.

The mortality tables subjoined have been constructed on the experience of the last ten years only, and from the data thus afforded are drawn the conclusions which I shall briefly lay before you. And I am bound to state, and I do so with much pleasure, that for the statistical data I am indebted to the recently published paper of my colleague, Dr. Murchison, who, at my suggestion, availed himself of the opportunities the Fever Hospital has afforded, and produced a most valuable monograph on the mortality of the different forms of fever, and on the causes which apparently influence their prevalence.[*] I strongly recommend this paper to your perusal, as it embodies a mass of facts of extreme interest and importance.

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[*] Med-Chir. Trans. vol. xli., 1858.

TABLE V.

Mortality of the Cases of Continued Fever of all forms admitted into the London Fever Hospital in ten years, 1848–57.

Years.	No. of Cases.	Deaths.	Mortality per Cent.
1848	707	148	20·93
1849	401	65	16·21
1850	361	50	13·85
1851	614	43	7·00
1852	561	50	8·91
1853	787	149	18·93
1854	714	112	15·68
1855	622	113	18·16
1856	1300	230	17·69
1857	561	99	17·64
Total...	6628	1059	15·98
Deducting cases fatal within 24 hours after admission	6567	998	15·19
Deducting cases fatal within 48 hours	6482	913	14·07

From this table it appears, that of 6628 patients admitted, comprising all the forms of fever described, the total number of deaths was 1059, or in the ratio of nearly 16 per cent., or 1 in 6¼. If from this number, however, be subtracted 61 cases, which proved fatal within twenty-four hours, the admissions will be reduced to 6567, and the deaths to 998, or in the ratio of 15·19 per cent. Or if the cases which died within forty-eight hours be deducted, the admissions will stand 6482, and the deaths 913, or in the ratio of 14·07 per cent., or less than 1 in 7.

This rate of mortality, deduced from the experience of the Fever Hospital, including not only every form of fever, but every variety of complicated cases, is probably somewhat higher than the death-rate of a like number of cases treated under more favorable circumstances. But it must be taken into account as stated in almost every annual report of the Hospital, that patients are received too often in the most hopeless condition, not only in very advanced periods of life, but under circumstances precluding all hope of recovery. This statement is proved by the very large proportion of patients who do not survive forty-eight hours after admission, as well as by the numbers received in a moribund state.

In regard to the mortality in different years, the table shows considerable variation. Thus, in one year (1851), the total death-rate was 7 per cent. only; in the following year it was nearly 9 per cent.; while in 1848 it exceeded 20 per cent.: and if the mortality of one form be taken, it appears that in two years—viz., in 1849 and 1857—the death-rate of typhus cases exceeded 25 per cent.

Dr. Murchison, in the paper alluded to, has made a valuable addition to our own statistics, by giving the mortality from fever of all forms, collated from the records of eleven other hospitals during the last eighteen years. Of these, one is in London, four in the provinces of England, three in different large towns in Scotland, two in Ireland, (Dublin and Cork), and one in Stockholm.

From these data, we find that in St. George's Hospital, London, the average mortality from all forms of fever was 11·3 per cent., or 1 death in 8 4-5ths; in Nottingham General Hospital, 12·78 per cent., or 1 in 7 7-9ths; in Birmingham Queen's Hospital, 14·08 per cent., or 1 in 7 1-10th; in Bristol Royal Infirmary, 9·47 per cent., or 1 in 10; in the Edinburgh Royal Infirmary, 11·61 per cent., or 1 in 8 2-3ds; in the Aberdeen Royal Infirmary, 9·14 per cent, or 1 in 11; in the Glasgow Royal Infirmary, 11·28 per cent., or 1 in 8 6-7ths; in Dublin Cork-street Fever Hospital, 7·46 per cent., or 1 in 13 2-5ths; Cork Fever Hospital, 4·3 per cent., or 1 in 23 1-4th; in Stockholm Seraphim Hospital, 10·6 per cent., or 1 in 9 3-7ths.

On this comparative table Dr. Murchison remarks, that the rate of mortality from fever during a series of years differs but little in the various hospitals of England and Scotland, being about 1 in 8; in some rather more; in others, rather less. In the Aberdeen Royal Infirmary, however, the mortality from 8783 cases during eighteen years has been only 1 in 11. This was due to the small mortality of the four years, 1842–4.

Taking the cases only for the last ten years, the mortality in Aberdeen, as elsewhere, was 1 in 8¼. Again in every instance, it will be seen that the mortality has varied greatly from year to year. In Aberdeen, it was under 4 per cent. one year, and in another, nearly 18 per cent. At Nottingham one year it was 30 per cent; in another less than 7 per cent. The mortality of Stockholm appears to be much the same as in England, perhaps rather less.

To these results, the Irish hospitals present a marked antithesis. Out of 150,939 cases of fever admitted into the Dublin Fever Hospital, since the year 1817, only 10,632, or less than 1 in 14 died, and during the last eighteen years, the mortality has been only 1 in 13^2. Again, in the Cork Fever Hospital, the mortality has been much less. Since the year 1817, out of 82,293 patients, only 3222, or 1 in 25¼ have died; and during the eighteen years contained in the table, the mortality has only been 4¼ per cent., or 1 in 23¼. Moreover the rate of mortality has varied much less in different years than in England and Scotland. Thus, in Dublin, in no year during the last forty, has it reached 10 per cent.; in the Cork Hospital, in only one year of the last forty, has it slightly exceeded 6 per cent. In Barker and Cheyne's report of the Irish epidemic, 1817–19, it is stated, that out of 100,737 patients in the hospitals of all Ireland, 4349 died, making the mortality 4·3 per cent, or only 1 in 23¼. No doubt, as Dr. Murchison says, this small mortality is partly accounted for by the greater facilities afforded to mild cases for entering the hospitals in Ireland; but whether this be the case or not, it plainly shows that there is a form of fever constantly prevailing in Ire-

TABLE VI.

Mortality of the different Forms of Continued Fever admitted into the London Fever Hospital during ten successive years, 1848–1857.

YEARS.	TYPHUS.			ENTERIC.			RELAPSING.			FEBRICULA.	
	Admissions.	Deaths.	Per Cent	Admissions.	Deaths.	Per Cent	Admissions.	Deaths.	Per Cent	Admissions.	Deaths.
1848	526	106	20·15	152	41	26·97	13	1	7·69	16	0
1849	155	39	25·16	138	26	18·84	29	0	...	79	0
1850	130	24	17.69	137	24	17·57	32	2	12·5	62	0
1851	68	6	8·82	234	30	12·82	256	7	2·73	56	0
1852	204	24	11·76	140	25	17·85	88	1	1·13	129	0
1853	408	90	22·06	211	59	27·96	16	0	...	152	0
1854	337	67	19·88	228	44	19·3	5	0	...	144	0
1855	342	83	24·27	217	30	13·82	1	0	...	62	0
1856	1062	207	19·49	149	23	15·43	...	..	...	89	0
1857	274	69	25·18	214	27	12·61	1	0	...	72	0
Total....	3506	715	20·36	1820	329	18·07	441	11	2·49	861	0

land, which is much milder, and in which the mortality is consequently much less, as compared with the fevers that prevail in this country.

1. *Mortality of Typhus Fever.*—According to the table, the mortality of typhus, including all cases, is 20·39 per cent., or nearly 1 in 5; but if the cases that died within twenty-four hours be deducted, it is 19·3 per cent. only; or if those which died within forty-eight hours be subtracted, it falls to 17·7 per cent., or about 1 in 5¾.

This appears to be the average death-rate in other places. For example, in the Edinburgh Infirmary in the years 1848 and 1849 it amounted to 22·3 per cent., and in the Glasgow Infirmary, for eleven years, it was 18 per cent.

2. *Mortality of Enteric Fever.*—The mortality of enteric fever turns out to be rather under that of typhus. Out of the 1829 cases treated in the London Fever Hospital, 333 died, being in the ratio of 18·29 per cent., or about 1 in 5½; and if the cases fatal within twenty four hours be deducted, it falls to 17¾ per cent.; or if those who died within forty-eight hours be subtracted, it is less than 17 per cent., or nearly 1 in 6. In one year, however, (1853,) the death-rate was greater than any year from typhus—viz., 28 per cent., or about 1 in 3½; and in another year (1848) nearly 27 per cent., or about 1 in 3 7-16ths. The smallest mortality in any year was about 13 per cent., so that in no year was it so low as it has been in some years from typhus; and, as Dr. Murchison has pointed out, the year in which the mortality was least was also that in which there was the greatest number of cases, whereas the mortality from typhus appeared to be the lowest when it was the least prevalent.

In the Glasgow Royal Infirmary, the mortality from this form (enteric fever) has exceeded even that in London, being 21·6 per cent., or nearly 1 in 4½.

3. The *Mortality of Relapsing Fever* is very small. According to the table it is not more than 2½ per cent., or 1 in 40. In the Edinburgh epidemic of 1848–49, it was under 4 per cent., and in that of Glasgow, between the years 1843 and 1853, it was 5 per cent.

The comparatively small rate of mortality of relapsing fever has an important bearing on the question of the mortality of fever as a whole. In proportion as it prevails at any time, will the death-rate of fever, including all forms, be diminished; and this circumstance explains the small rate of mortality in the London Fever Hospital in 1851, as well as in the epidemics that prevailed in Edinburgh, Aberdeen, and Glasgow in 1843.

Dr. Murchison strongly, and with much truth, urges the importance, when comparing the mortality from fever at different times and places in order to judge of the merits of different plans of treatment, or for other purposes, of taking into account the form of fever which has prevailed. Thus, while the total mortality from fever in Glasgow was much below that of the London Fever Hospital, that in each of the individual forms was greater, the difference resulting from a much larger proportion of relapsing cases which occurred in Glasgow. The same remarks apply also to febricula, of which the greater the proportion of cases, the less will be the rate of mortality for all the cases of fever taken together.

It is very probable that the small death-rate constantly observed in the Irish fevers may admit of the same explanation.

Influence of Age on the Mortality of Fever.—According to the experience of the London Fever Hospital, the mortality of all forms from five to ten years, of age was 7·65 per cent.; between ten and fifteen, it was less than at any other period of life; after this, it increases rapidly, until of those above fifty years of age, the mortality reaches 48½ per cent., or nearly one-half.

In regard to the mortality of individual forms, the subjoined table gives in one view the mortality of the different forms at each quinquennial period of life. (See Table VII.)

The death-rate from typhus between the ages of five and ten, appears to be only 7·65 per cent.; between ten and twenty, it is under five per cent. After the age of twenty, however, it increases rapidly, so that of those above thirty years of age the mortality is 36 per cent.; above forty it is 43·66 per cent.;

above fifty it is 55·82 per cent.; and above sixty, it reaches as high as 62·34 per cent.

The mortality from enteric fever between the ages of ten and fifteen is about 13 per cent., showing a smaller death-rate in early life than in typhus. At the different periods of life, too, there is greater uniformity in the mortality than in typhus, though, as in typhus, the death-rate keeps pace with advancing years. For example, above thirty years of age, the ratio is 27·38 per cent.; above forty, it is 27·17; above fifty, it is 46·15; above sixty, it is 55·55 per cent.

It may be noticed as singular that in both typhus and enteric fever, the death-rate is lower between the ages of forty and forty-five than in the period of life immediately preceding, nor should the fact of the greater mortality of typhus and relapsing fever in advanced life be overlooked.

Lastly, from the mortality table deduced from the records of the Fever Hospital, it comes out that the mortality from fever of all forms increases as life advances, the mean age of the fatal cases far exceeding that of those who recovered; for while the mean age of those who died (including all forms) was thirty-six, the mean age of those who recovered was only twenty-four.

TABLE VII.

Mortality of the different Forms of Fever for each Quinquennial Period of Life, deduced from 6628 *Cases admitted into the London Fever Hospital in Ten successive Years,* 1848–57.

AGES.	TYPHUS.			ENTERIC.			RELAPSING.			FEBRICULA.	
	Admissions.	Deaths.	Per Ct.	Admissions.	Deaths.	Per Ct.	Admissions.	Deaths.	Per Ct.	Admissions.	Dths.
Under 5 years ...	17	3	17·65	4	0	0	4	0	0	8	0
From 5 to 10 ...	183	14	7·65	103	14	13·59	32	0	0	83	0
" 10 to 15 ...	363	18	4·95	250	32	12·8	63	1	1·58	133	0
" 15 to 20 ...	546	26	4·76	519	84	16·18	92	1	1·08	186	0
" 20 to 25 ...	495	48	9·69	404	81	20·05	76	0	0	163	0
" 25 to 30 ...	343	52	15·15	240	45	18·75	37	0	0	60	0
" 30 to 35 ...	323	55	17·02	100	30	30·	37	3	8·1	67	0
" 35 to 40 ...	270	89	32·96	60	14	23·33	19	2	10·52	45	0
" 40 to 45 ...	292	87	29·79	46	8	17·39	40	1	2·5	44	0
" 45 to 50 ...	212	82	38·68	20	5	25·	8	2	2·5	20	0
" 50 to 55 ...	150	77	51·33	8	2	25·	15	0	0	12	0
" 55 to 60 ...	100	51	51·	9	4	44·44	7	1	14·28	9	0
" 60 to 65 ...	88	49	55·68	7	4	57·14	5	0	0	6	0
" 65 to 70 ...	42	28	66·66	1	1	100·	1	0	0	5	0
" 70 to 75 ...	24	17	70·83	0	0	0	1	0	0	3	0
" 75 to 80 ...	6	5	83·33	1	0	0	0	0	0	1	0
Above 80 years	2	2	100·	0	0	0	0	0	0	0	0
Not ascertained	50	12	22·	48	5	10·41	4	0	0	16	0
Total	3506	715	20·36	1820	329	18·07	441	11	2·49	861	0

As to the influence of *sex* and of *season* on the mortality of fever, neither the one nor the other seems to have any particular effect.

Change-of-Type Theory.—Before entering on the consideration of the treatment of the several forms of fever, it is necessary that I should advert to an important part of their pathology—the question of fevers, and indeed of acute diseases in general, having for a long series of years past undergone a change of type. This doctrine is now agitating in no small degree the medical and even the general community, and, as usual in such controversies, with no lack of combatants on either side. The one party contends that the changes that have recently taken place in the views of a considerable proportion of the profession as to the treatment of acute maladies, including fevers, are to be ascribed mainly to the circumstance that the whole range of pyrexial diseases have for more than a quarter of a century undergone a marked change in epidemic constitution (to adopt the term employed by Sydenham), or, according to modern phraseology, a change of type, the vital powers being supposed to be in a low or depressed state, and therefore unable to withstand the combined influence of the disease and the routine antiphlogistic treatment, more especially bloodletting. Others assert, and in my opinion upon philosophic grounds, that these recent therapeutic innovations are the result of improved views of pathology—of a more correct knowledge of the various processes that take place in the living body consequent on diseased action, as well as of a more just appreciation of the probable powers of remedies in controlling it. They entirely repudiate the idea that there has been such an alteration in the epidemic constitution or type of diseases as to warrant the almost total change of treatment recently advocated.

If we examine closely this theory as applicable to the acute diseases of the last thirty years—and this can only be undertaken by those who have witnessed and studied their type during the period referred to—and weigh dispassionately the evidence adduced, more especially by Nature herself, I apprehend that the true explanation of the difference of treatment will be found to consist in the more cautious or restricted notions now entertained as to the necessity for the heroic remedies formerly so freely, and I may say indiscriminately adopted. Even those who are in favor of this doctrine cannot assert that the pathological phenomena of acute diseases have undergone a change, for the symptoms general and local, and all the essential morbid processes of the entire class of pyrexial diseases have not undergone the slightest alteration; and if the evidence as to the depressed or asthenic condition of the vital powers be scrutinized, I have a strong impression that the conclusions adopted, more especially in reference to fevers as a class, are not warranted by facts. And how important is it to form a correct judgment of this doctrine, since it determines the line of treatment to be pursued, and may even involve the safety of many valuable lives!

The subject has not escaped my attention, and I have come to the conclusion that though certain cyclical differences in acute diseases, of longer or shorter duration, may have been occasionly detected, the notion of change of type, as regards the various forms of fever, has been greatly exaggerated.

Let me state the grounds upon which I have come to this conclusion, which I admit is at variance with the ideas of many physicians whose knowledge and judgment entitle them to great consideration.

We find that Sydenham, who is considered to be the author of this change-of-type theory, cautioned the medical men of his day against too hastily determining the treatment of a new epidemic—until, in short, the practitioner and the disease were better acquainted—on the reasonable ground that epidemics assumed one time a more acute or phlogistic, at another a less acute or asthenic character; but we do not find that he had observed a change in one direction only, and for so lengthened a period as considerably more than a quarter of a century. If the records of epidemics of other varieties of fever be examined—the eruptive for example—it will be evident that, during the same period (in small-pox, measles, and scarlet fever) every variety or modification of type has been observed, the type being sometimes acute, sometimes more or less asthenic, and requiring, consequently, variation in treatment.

I apprehend that the true explanation will be found in the fact that, until very recently, little or no attention has been paid to the ever-varying differences in form which fever assumes—at one time typhus, at another enteric or typhoid, or it may be relapsing fever, constituting the features of the prevalent fever, though it should be kept in view, that whatever be the character or type of an epidemic, individual differences arise, according to the peculiar circumstances in which a single individual, or a number of persons, or a community, may be accidentally placed. The question of the identity or non-identity of the several forms of continued fevers thus becomes of the greatest importance in relation to the change-of-type theory. For example, the great argument adduced by those who support the doctrine is, the decided results in the Edinburgh epidemic of 1817-20—and which I had the opportunity of witnessing—of the large indiscriminate bleedings in diminishing the mortality. This argument, however, loses much of its intended effect when it is considered that by much the larger number of cases consisted of relapsing fever—a form the mortality from which has already been shown to be exceedingly small under any kind of treatment; and that the death-rate has been even less when no blood was abstracted at all. As in other epidemics, the mildness or severity of this fever has varied at different times. We are told, somewhat exultingly, that under the unnecessarily profuse phlebotomy practised in 1817-20 the mortality did not exceed 1 in 22 at any period of the disease, and was reduced so low as 1 in 30 as the epidemic spread; but in the argument it has been overlooked that the mortality of this fever is liable to much variation. For example, in the epidemic of 1843, the history of which has been given by Dr. Cormack, the deaths were 1 in 16; of the cases recorded by Dr. Wardell (1843-4) it was 1 in 20; and of 203 cases treated in the Edinburgh Infirmary in 1848-9, there were only 8 deaths; and if we extend our inquiries to other places, we find that of 7804 cases of relapsing fever admitted into the Glasgow Infirmary between the years 1843 and 1853, the deaths were 405, or about 5 per cent.; and in the London Fever Hospital of 441 cases admitted during ten years (1848 to 1857), 11 died, or in the ratio of about 1 in 40.

This variation in the mortality could not be ascribed to the remedies employed; for Dr. Cormack states that, having been urged by medical friends to test the effects of bloodletting, he instituted trials of this remedy, but candidly admitted that, though the symptoms were sometimes evidently relieved, the beneficial changes were often not effects but sequences of the bleeding, as was satisfactorily proved by the very same changes frequently occurring as suddenly and unequivocally in patients in the same wards, and affected in the same way, *who were subjected to no treatment whatever*. And in regard to the treatment instituted at the London Fever Hospital, when the mortality of relapsing fever did not exceed one in forty, with scarcely an exception, no blood was abstracted at any period of the disease.

It is clear, therefore, that the change of type theory cannot rest on comparison of the treatment by indiscriminate phlebotomy formerly practised, when all acute diseases, including fevers, were supposed to be under the dominion of the lancet.

But though the grounds on which the question has been argued are, in my opinion, erroneous, one good result has followed in the death-blow which the practice of indiscriminate phlebotomy, formerly adopted in all acute maladies, has received; for too often little or no regard was paid to individual peculiarities, or even to the stage of the disease for which the bleeding was employed. The inquiry was simple as to the existence of fever or of inflammation; and the question once settled, the lancet was unsheathed, and much blood unnecessarily shed, and from the effects of which the patient did not recover perhaps for months. But, on the other hand there is great hazard of many important diseases being allowed to gain the ascendency from the indecision that has resulted from the complete alteration of therapeutic principles which the discussion of this question has brought about. My own experience tells me that

I have witnessed the same good effects from moderate abstraction of blood in some forms of acute disease—occasionally even in the early stage of enteric fever—as in by-gone days. I have not observed that loose condition of the crassamentum of the blood, nor nor the absence of the buffy coat so characteristic of low vitality, but I have been careful in the selection of cases as well as of the period of the disease before resorting to bloodletting; and I am satisfied that, with this precaution, there will in general be little regret that this remedy, powerful for good or for evil, has been had recourse to. It is, however, consoling to observe, that in the present day there is a more just appreciation of the powers of curative agents, as well as of the principles on which they should be applied, not only in acute but in chronic diseases. This is the consequence of studying the effects of disease on individual structures, and of the efficacy or inefficacy of the remedies to subdue the changes that take place when certain morbid actions have become established. We are now, or ought to be satisfied, that the most scientific as well as the most successful course in many acute diseases, after a certain period is not to interfere too much, if at all, with the operations of Nature in her efforts to repair the injury parts or organs have sustained by disease.

Prophylaxis of Fevers.—If the modern view of the nature of fevers—the doctrine which teaches us to consider all forms as originating in certain changes in the blood—be accepted, it is a natural subject of inquiry if there be any means of counteracting or neutralizing the effects of the fever poison, and thus preventing the development of the disease?

By some, *bloodletting* has been proposed and pursued, though were such a proceeding in the present day hinted at, few patients would be found inclined to submit to it. In former years, however, I have seen this practice pursued, and in one of my attacks, when certainly all the usual premonitory symptoms had apparently set in, I am satisfied that the disease was arrested by a single prompt bleeding; and I certainly have witnessed the same good effects from this remedy in others. But this practice was put in force in the days when bloodletting was supposed to be the great remedy in all acute diseases, including fevers. This case would, however, be special indeed for which, in the present day, bleeding would be resorted to as a prophylactic or preventive remedy.

The exhibition of *emetics* has been proposed, on the supposition that, the virus or poison of fever acting primarily on the gastric system, the early administration of an emetic, by removing the offending agent, might probably intercept its absorption into the blood. According to others, by the act of vomiting, and the general commotion thus induced, the poison has been supposed to be got rid of, and its effects prevented. Some, again, have thought, that as there is an admitted sympathy between the stomach and the skin, the sickness and vomiting cause a determination to the surface, and in this way an exit for the disturbing material may be established.

But, unfortunately for this theory, the absorption of the poison is more probably effected through the pulmonary system, and with such rapidity does it often appear to act on the blood and solids, that even the early exhibition of an emetic may be too late for the anticipated results.

Equally insufficient grounds have been adduced for the employment of *diaphoretics*, which appear to have been suggested by observing the occasional termination of acute diseases by sweating. No one, however, I believe, ever witnessed a single instance in which there was the smallest ground for believing that the fever poison was dislodged by such means.

The *cold affusion*, first introduced and warmly advocated by the late Dr. Currie, has been put to the test of experiment; but notwithstanding the bold affirmation of its author, that if resorted to at the very commencement of the fever—at all events before the third day—it very generally, if not invariably, put an end to the symptoms, in fact, extinguished the disease—the experience of those who have given this method a fair and impartial trial is by no means favorable to its adoption. When I acted as clinical assistant to the late Professor Home in the Edinburgh Infirmary, the cold affusion was fairly tested, and the result was, that not in a single instance was the fever cut short, or its duration apparently abridged by it. It should, moreover, be kept in view that it is applicable only to the more acute forms of fever in vigorous subjects; for in the more delicate the shock may be too great, and death even result from the practice—an event which occurred many years ago in the family of a late eminent professor, and tended to throw the practice into discredit, and ultimately led to its final abandonment. The late Dr. Williams, in his work on "Morbid Poisons," p. 71, says—"If we turn from this empirical practice of cold affusion to the great and leading doctrine of fever, which attributes this disease to the action of a morbid poison, it will be plain, if that hypothesis be correct, that cold affusions could not interrupt the course, though it might modify the symptoms. A poison circulating with the blood cannot be removed from the system by ablution of its surface. No person expects to stay the course of small-pox, of scabies, or of syphilis by a similar application. We might, therefore, have predicted, *à priori*, that cold effusion could not remove from the body the poison of typhus fever, and consequently had no power to stop the course of the disease, though it might modify the symptoms."

The *cinchona bark* (or the salts of quinine) has by some been supposed to have a specific power in arresting the progress of fever. It has been exhibited with this view in large doses, repeated at short intervals until the peculiar effect of the remedy—cinchonism—has been induced, indicated by headache, vertigo, tinnitus aurium, and a sedative effect on the heart's action. This remedy, like others, after being much extolled, had fallen into disuse, until recently revived by Dr. Dundas, of Liverpool, both as a prophylactic and curative agent. The united testimony, however, of those physicians of whom I have made inquiry as to the results of trials made with this remedy lead to the inference, that its administration in any form of continued fever, as a preventive or prophylactic agent, cannot be relied on, and accords with my own experience in the few cases in which I have employed it for this purpose.

From these cursory remarks, therefore, it is apparent that fever, when once developed, can rarely be arrested; or, in other words, that the means of expelling the poison, or of depriving it of its noxious effects, have yet to be discovered. The duty of the practitioner is to endeavor to guide the disease, and to prevent as much as possible injury to organs essential to life, bearing in mind that this requires a certain and probably definite time to accomplish, even under the most judicious treatment.

LECTURE XI.

TREATMENT OF ENTERIC FEVER.

Special treatment required—management of the sick chamber in fevers—treatment of the milder forms of enteric fever—of the more severe—the question of bloodletting considered—treatment of the intestinal affection—diarrhœa—hæmorrhage from the bowels—tympanitis—dietetic management—treatment of the advanced periods—wine and stimulants—treatment of secondary affections—of the brain—of laryngeal angina—of the pulmonary organs—of peritonitis and intestinal perforation.

THOUGH the pathology of this disease has been minutely investigated, its therapeutics, or the principles on which its treatment should be conducted, have not received corresponding attention. This is to be ascribed, in some measure, to the circumstance that many, especially of the Cullenian school, still hesitate to accept, if they do not altogether deny, the distinctions between the different forms of continued fever, and consequently apply indiscriminately the same therapeutic indications to all. It must be obvious, however, that the treatment of each form differs in essential particulars.

Before deciding on the measures to be adopted in a given case,—of whatever type,—several circumstances should be kept in view: for example, its stage or duration, its mildness or gravity; the existence of secondary lesions; the prevailing or epidemic constitution—that is, the varying but unknown circumstances which influence acute diseases in general—and, lastly, the *individuality* of the patient, if I may use the expression, to include the age, habits, occupation and condition of life, previous state of health, with such collateral information as can be obtained.

And before I proceed to discuss the principles of treatment, let me say a few words on the management of the sick chamber—a point of the greatest importance, though often overlooked, and closely connected, not only with the comfort of the invalid, but with the issue of the case.

The first consideration should be the selection of a properly qualified nurse. The value of the services of one accustomed to fever cases can scarcely be over-estimated, as there are numerous details that must be left to her discretion, and which can only be satisfactorily undertaken by a person of judgment and experience, and who has been trained for such duties. In severe cases, a nurse for day and another for night duty are indispensible.

We shall presume that the apartment is as large as is necessary for the requirements of the patient. The ventilation as well as the temperature of the room should be attended to. The former may be effected, not by keeping the window constantly open, often regardless of season or weather, but by allowing a current of fresh air to pass through the room occasionally, and then closing it, while the temperature should be kept as near 60° as may be, and ought never to exceed 65°, though sometimes in the summer and autumn months it may be difficult to obtain this limited range.

The bed on which the patient is placed, should be of moderate size, and furnished with a soft hair mattress; and if the room be of sufficient dimensions to contain two small beds, the comfort of the invalid will be promoted by occupying one during the day and the other in the night. This plan is indispensable in the more severe cases, and more especially so when the evacuations are passed unconsciously. The room should be kept perfectly quiet, and only the attending nurse and an occasional visitor, when sanctioned by the medical attendant, allowed to have access, and the visits of such persons should be short.

For the first week of the fever, nothing but the slightest farinaceous food should be given, unless by the direction of the medical attendant. Fruits should be avoided altogether, or used very sparingly, and thirst may be allayed by any agreeable drinks—whey, Seltzer water, rice water, lemonade, or apple tea, which in summer may be iced.

Presuming, then, that provision had been made for the due administration of our remedies, and that the form and stage of the fever, with the individual circumstances of the patient, have been ascertained, we shall suppose that we have to deal with enteric fever of a mild character and in the early stage. I need scarcely observe that the patient should be confined to bed, since this part of the management is generally consonant with the feelings, though sometimes, under the impression that the disease is of a trifling nature, an effort is made to keep about until the increasing prostration compels the patient to remain at rest.

Emetics are occasionally employed, but this class of remedies should be given only at the very beginning of the disease, and when there is evidence of acrid matters in the stomach. Under such circumstances the exhibition of an emetic is often followed by much relief, though it may not cut short the fever. But the opportunities of prescribing emetics are comparatively rare, as medical aid is seldom sought at the very beginning of the disease, to which period their administration should be restricted. As to the supposed benefit from the shock given to the system, or the determination to the skin or other organs induced by the act of vomiting, I must confess my doubts, and I should hesitate to adopt or sanction their use on such grounds.

In regard to aperients, I may observe that they, too, should not be prescribed indiscriminately in enteric fever. The bowels generally act spontaneously, and if they do not, the mildest aperients should be selected, merely with the view of relieving the system of any accidental accumulation. But let me caution the inexperienced in the management of this fever against the calomel and black draught system, which may do incalculable injury by irritating the bowels and increasing the local intestinal disease.

No dependence should be placed on salines, as they are called; but, if something must be done to amuse the patient, a julep of the citrate of potash or ammonia is very grateful, and may tend to allay thirst and promote determination to the skin. The German Seltzer water is a very grateful, harmless saline. The dietetic management should be restricted to farinaceous matters, with the addition of beef-tea or chicken broth.

It may be inquired, what is the condition of Peyer's glands in these mild cases of enteric fever? They are probably simply enlarged from the deposit of typhous matter, but the subsequent changes are arrested, and they probably return to their natural state as the general febrile movement subsides and convalescence takes place.

In mild cases, therefore, medical interference should be restricted to the management of the sick chamber, enjoining mental and bodily repose, regulating, if necessary, the alvine excretions, and restricting the diet to simple farinaceous matters and weak animal broth. If it be deemed necessary to prescribe salines, an occasional dose of an alkaline citrate may be interposed.

In by far the larger proportion of cases, however, enteric fever assumes a much more severe character. There is more violent febrile disturbance from the beginning, indicated by the more frequent and severe rigors, and the more pungent and enduring heat of skin; while the condition of the vascular, nervous, and gastric systems show that the poison has acted with considerable intensity. The fever, in short, is of a more serious character, and consequently requires more decided measures, modified, of course according to the circumstances each individual case presents. If there be much general excitement, more especially throbbing headache, flushing, restlessness, and perhaps delirium, the vascular fulness must be reduced. This may be accomplished by small doses of antimony, repeated every three or four hours, shaving the head, and applying a spirit lotion to the scalp. Should this plan not succeed in combating the cerebral excitement, or should symptoms in other organs arise to indicate that the struggle is to be severe, the question of bloodletting is forced on our consideration. It would be unprofitable to discuss the various grounds on which bloodletting has been employed in the treatment of fevers. I would rather consider the subject as one to be determined by experience and observation; and it is to be regretted that in our own country the effect of bloodletting as regards enteric fever has scarcely been put to the test, from this remedy having been employed indiscriminately, without reference to the type or form an epidemic may have assumed. On the European continent and in the United States, where enteric fever is endemic, we have the recorded opinions of practical physicians; and, as might be anticipated, there is much difference in their views as to its utility, the remedy being extolled by some, condemned by others, and in the present day, if not entirely abandoned, adopted under very special circumstances only.

If we refer to Louis, we find that he abstracted blood in nearly all his cases, but restricted the practice to the early stage of the disease, and repeated the bloodletting according to the severity of the symptoms and the powers of the patient. In his opinion it was useful, within those limits, in shortening the duration and mitigating the severity of the fever; but in mild cases, even in the early stage, as well as in the more severe, after the second week, he was satisfied that the abstraction of blood was of doubtful efficacy, if not positively hurtful.

Andral does not mention the practice with favor. He prescribed it in seventy-four cases, of whom thirty-five—nearly one half—died; and of this number, in sixteen only was there evident amendment in the symptoms; while in sixty-four, the disease appeared to be even somewhat aggravated by the loss of blood: but it would have been more satisfactory had the description of the symptoms for which the bleedings were employed, and especially the stage of the fever, been detailed.

Chomel, who was a thoroughly practical physician, thought, on the other hand, even in mild cases, a single moderate bleeding at the commencement beneficial in relieving the more urgent symptoms, shortening the duration of the fever, and preventing local affections. In the more severe, in which there was unusual general excitement, and especially if there were serious affection of some organ, he advised the venesection to be repeated; but he enjoined caution even under such circumstances, and warned the practitioner that a smaller amount of blood should be abstracted than in primary inflammation.

The great advocate of bloodletting in this disease, however, is Bouillaud. This distinguished Parisian professor, in his "Philosophie Médicale," announced that he had discovered an infallible mode of treating all acute diseases, including fevers, by copious bloodletting. He prescribed five or six bleedings in succession, to the extent of twelve or sixteen ounces at a time, as much being often abstracted by cupping or leeching in the intervals; nor were these heroic measures limited to the early stage, but adopted even in the second week of the fever. This bold treatment gave rise soon afterwards to much discussion in the Parisian medical circles, which was carried on with no little warmth, and led to a rigid examination of the grounds on which its boasted success was founded. The investigation was instituted by Louis, whose treatment had been placed in unfavorable contrast, and he had little difficulty in exposing the fallacy of the statistics of Bouillaud, as well as the diagnostic errors into which he had fallen.

In the United States, where, in consequence of enteric fever being endemic, ample scope is afforded for observing its pathology and treatment, it would appear that the practice of indiscriminate bleeding does not find favor, its employment being restricted to special circumstances; as, for example, when the febrile symptoms run high in young and vigorous subjects, but more especially if there be severe headache, flushing, throbbing in the cerebral vessels, or acute delirium. For such symptoms the physicians of the United States do not hesitate to prescribe either general or local bloodletting, according to the emergency.

I have not brought these opinions before you with the object of recommending bloodletting in the treatment of enteric fever as *a general rule*. On comparing carefully the results of cases treated by others with my own experience, I am satisfied that in mild cases, loss of blood is uncalled for, and, if practised tends only to lower the powers, and retard convalescence; that in cases of severity, and especially when the symptoms pursue a rapid downward course, indicated by marked prostration, compressible pulse, low delirium, or exhausting diarrhœa, every ounce of blood abstracted diminishes the chance of recovery. When the fever assumes this grave aspect, there are influences at work, the nature and agency of which are unascertained, but they produce a depressed state of the vital powers, which renders evacuations of any kind, and especially bloodletting, hazardous in the extreme.

But intermediate cases are of not unfrequent occurrence, in which, in addition to the intestinal affection, there is unusual general excitement, or it may be that some organ important to life is implicated. Under such circumstances, I have observed marked relief after the loss of a few ounces of blood, (rarely exceeding ten,) if taken in the early stage of the fever; and in the comparatively few instances in which of late years I have ventured on this remedy, it has been apparent that, besides the improved feeling admitted by the patient, the duration of the fever was shortened. In doubtful cases, in which the propriety of bloodletting may be questionable, antimonial preparations are of great service in subduing the excitement without the hazard of lowering unduly the powers of the patient.

We have seen that the poison which induces enteric fever has a specific action on the intestinal glands (Peyer's patches), which undergo the changes explained in a former lecture. This intestinal affection is one of the earliest phenomena, and accounts for the diarrhœa which is so commonly present from the commencement of this fever.

I must, however, protest against the practice occasionally adopted of treating the intestinal affection by local abstractions of blood, as if it were a local phlegmasia—a practice which, without improving the intestinal disease, tends only to impair the patient's strength. The typhous deposit in the intestinal glands, not strictly secondary, bears the same relation to the fever as the variolous eruption does to small-pox, or the morbillous rash to measles. Should, however, the follicular disease produce great irritation, or, perhaps, inflammation of the mucous membrane, or should the morbid action spread deeper and implicate the peritoneum, no time should be lost in applying leeches over the region of the cæcum, followed by warm poulticing, and a combination of mercury with chalk and Dover's powder, at short intervals.

In the management of the diarrhœa, let me offer you a caution against the exhibition of aperients, which some French physicians—even Louis himself—have recommended.

In the very commencement, and particularly if there be uncertainty as to the state of the bowels, it may be well to exhibit a mild laxative, such as castor oil, magnesia, phosphate of soda, or rhubarb; and should the selected aperient act unduly, an aromatic draught, with a few drops of laudanum, may be given to check the irritation.

If the diarrhœa be moderate, it should not be interfered with; but treated simply by bland fluids, such as thin barley-water (made by infusion), rice-water, arrowroot, weak animal broth being at the same time allowed.

If it be necessary for effect to prescribe, the almond mixture, or a mixture containing spermaceti, with or without a few drops of laudanum, or compound tincture of camphor, may be given.

When the evacuations are frequent (more than three or four in twenty-four hours), the powers of the patient become enfeebled, not only by the drain on the system, but the very exertion in getting out of bed tells on the patient's strength. It becomes, therefore, necessary to check this symptom. Sometimes a few drops (five to ten) of laudanum, or fifteen to twenty of the compound tincture of camphor, in any agreeable vehicle, answers very well, and may be repeated according to circumstances. The local exhibition of opium by an enema, containing ten to fifteen drops of laudanum in three or four ounces of barley-water, or thin starch-gruel, and repeated according to circumstances, is often preferable, if the patient will submit to it.

But if, notwithstanding the use of opiates in the way mentioned, the diarrhœa persist, we must have recourse to other remedies of the astringent kind, either alone, or combined with opium. We may select from the mineral or vegetable kingdom, the former affording, however, the best and most suitable.

The mineral acids—the diluted sulphuric, nitric, or phosphoric—combined with laudanum in the proportion of fifteen minims of the one (the acid) to three, four, or five of the other, (the laudanum,) are well suited, and may be taken at longer or shorter intervals, according to circumstances.

The diacetate or sugar of lead has considerable power over the intestinal affection. I am in the habit of giving it, even in the early stage, every six or eight hours, under the impression, from its power over inflammation of mucous surfaces, that it is capable, not only of controlling the diarrhœa, but of keeping in check the ulcerative process in Peyer's patches. It may be given alone in three-grain doses, either in pill or solution, or in combination with small doses of the solution of acetate of morphia, after every evacuation. The solution of acetate of morphia, made by dissolving six grains of the alkaloid in two drachms of spirit of wine and six of distilled water, should be used in preference to laudanum, with which sugar of lead does not appear to harmonize.

The sulphate of copper in combination with opium is a valuable remedy. Indeed I do not know one better suited, especially in protracted cases. A pill, containing an eighth of a grain of this salt, and the same quantity of solid opium, administered every four, six, or eight hours, will seldom fail to check the diarrhœa, while there is reason to suppose that, like sugar of lead, it exerts a beneficial influence on the intestinal affection.

From the nitrate of silver I have also seen excellent effects. It may be given in quarter-grain doses, with or without opium, every six hours, or after every liquid evacuation. The possibility of its darkening the skin is, however, an objection to its employment urged by some practitioners, but though I have prescribed it extensively in this intestinal affection, and continued its use for a considerable time, I have never witnessed any approach to discoloration, nor do I think, in the small doses recommended, there is much risk of it.

Alum is another remedy of the astringent class to be relied on, the best mode of administering it being in the form of alum whey, made by throwing one drachm of alum in powder into a pint of boiling milk, the whey being separated from the coagulum by straining. Of this two tablespoonfuls may be given at intervals of three or four hours, or after every liquid evacuation.

Of remedies from the vegetable kingdom, I may mention krameria, logwood, and catechu, which, like the mineral astringents, are most efficacious when combined with opium. I may, however, remark that, on the whole, I have seen most permanent benefit from sugar of lead, sulphate of copper, and nitrate of silver, in combination with opium, either of which, when judiciously managed, will do all that an individual remedy can effect in controlling the diarrhœa.

Hæmorrhage from the bowels is a pretty certain indication of intestinal ulceration, the source of the blood being principally from the ulcerated surface. I have often been surprised at the large quantity discharged without the patient being materially lowered. This happens, however, only in robust subjects, and in such circumstances, we must not hastily interfere with this symptom. But those who have less constitutional vigor are generally much enfeebled by even a moderate discharge of blood from the bowels, especially if it takes place in the latter stage of the fever, so that in such cases it is necessary to adopt measures to arrest the hæmorrhage.

The most perfect quietude should be enjoined, cold or iced drinks given, the abdomen covered with cloths dipped in cold vinegar and water and sugar of lead, in five-grain doses, with the solution of acetate of morphia, or a combination of gallic acid, with opium, given at short intervals. When the hæmorrhage is moderate, the starch-and-laudanum enema will often alone control it.

I have prescribed occasionally, with benefit, a nostrum called Ruspini's tincture. It consists principally, I believe, of gallic acid in some coloring fluid. The oil of turpentine, in doses of from twenty to thirty drops in emulsion, is also a good remedy, taking care to withdraw it if it produce irritation of the urinary organs. Should the powers be much reduced by the loss of blood, wine, brandy, and other cordials, are, in addition to the remedies pointed out, to be administered; while the nervous system is calmed by opium or its alkaloids.

Besides internal remedies, various local applications often afford material assistance in the treatment of the intestinal affection. Much benefit is often derived from warm applications—either a large, thin linseed poultice, or, what is a more agreeable fomentation, two folds of lint, sufficiently large to cover the belly, dipped in warm water and applied quite hot, the moistened lint being protected by an oil-silk covering to prevent evaporation. This may be renewed from time to time, according to the feelings of the patient, and is always grateful and soothing. If the tympanitic distension be considerable,—and there is more or less in every case,—oil of turpentine may be added to the warm poultice or moistened lint, and kept on as long as it can be borne, the tolerance of this stinging application varying with the sensibility of the skin. I am in the habit of keeping the right iliac region tender by the turpentine, when its more extended application over the abdomen is either unnecessary or objected to by the patient. If it produce much pain and irritation of the skin, it should be used occasionally only—indeed, few patients can bear it long at a time. If the odor of the turpentine be an objection, the compound camphor liniment may be substituted.

The tympanitic distension of the belly is often distressing. The mucous membrane of the stomach and bowels has the property of secreting air in abundance during the health, and when it takes on a congestive or inflammatory action, this secretion is increased, and hence we find tympanitis an almost invariable accompaniment of enteric fever, more particularly in the middle and latter stages. It is sometimes so great as to seriously embarrass the breathing by impeding the descent of the diaphragm; and though the secreted air is accumulated in great abundance in the colon, it is seldom passed per anum. This symptom, if it occurred early in the fever and the powers of the patient are not much impaired, is best treated by the application of leeches to the abdomen, followed by emollient applications and the internal exhibition of the diacetate of lead. But should local bloodletting be inadmissible, turpentine stupes may be substituted, while the lead is given in suitable doses internally. But it is often necessary, from the amount of distension, to adopt some mechanical expedients to get rid of the accumulated air, such as the introduction into the rectum of a flexible tube, or catheter of the largest size, or the common œsophagus tube of the stomach pump, properly secured, so as to prevent it slipping into the bowel. But before having recourse to mechanical means, I am in the habit of prescribing a fetid enema, consisting of half an ounce or more of the tincture of assafetida in a pint of common gruel, or half an ounce of the confection of rue in a pint of camphor mixture. I have seen either of these remedies, carefully administered, followed by the expulsion of an enormous quantity of confined air, to the patient's great relief. If they fail, I have applied in some cases with happy effects the stomach pump per rectum, and withdrawn by the syringe the accumulated air, which may be passed through the lower tube of the stomach-pump into a basin containing water. But this should only be had recourse to when the introduction of the catheter or œsophagus tube fails.

In protracted cases, accompanied with gradual emaciation and irregular hectic paroxysms, there is little question that the intestinal ulceration is in a state of slow activity; under such circumstances I know no remedy equal to the sulphate of copper with opium, or the nitrate of silver, as already recommended, perseveringly administered, supporting at the same time the patient's strength by light broths, eggs, farinaceous preparations, and perhaps the more delicate kinds of white fish.

If there be not speedy amendment, the case is apt to be given up as hopeless; but the duty of the practitioner is to persevere even under discouraging circumstances. Many a time have I witnessed patients, emaciated almost to a skeleton, gradually recover, and reward many weeks' anxious care, and even when it was thought scarcely possible that the intestinal ulceration would ultimately cicatrize.

Let me draw your attention to the bladder, which is liable to become distended in the advanced stages of this fever. There may be complete retention of urine, or it may partially escape unconsciously, and thus the nurse, or even the medical attendant, fancy all is right, so far as the bladder is concerned. There can be no difficulty, however, in determining the point, if the region of the bladder be carefully examined, a single percussion stroke being sufficient to the practised finger to indicate the presence of accumulated urine, unless there be such an amount of tympanitic distension as to render it impossible to come to a decided conclusion as to the state of this organ. If there be doubt, introduction of the catheter should not be delayed. In all cases, therefore, where there is great prostration, more especially if there be secondary brain affection, the state of the bladder should be daily inquired into, and not left to a report of the nurse, however experienced and attentive.

A point of much importance in the treatment of enteric fever is the due regulation of nourishment; indeed it requires equal discrimination as the administration of remedies strictly so called. The practice formerly adopted of almost entirely prohibiting nutriment in the management of fever originated in the erroneous views entertained by the solidists of the great similarity between, if not the perfect identity of, inflammation and fever; and with such ideas of its nature we cannot wonder at the dietetic restrictions inculcated. But whatever difference may still exist, as to the indiscriminate exhibition of stimulants, few dispute the advantage of giving suitable support even in the early stage of enteric fever.

For the first few days, the most simple articles only —rice or groat gruel, thin barley-water, rennet whey, or weak black tea—should be allowed. The appetite is usually so much impaired that there is little difficulty in imposing restriction, but as the fever progresses it is better to allow a little more nourishment in the shape of thin panada, with a small quantity of beef-tea or any of the animal broths. I generally allow from half a pint to a pint of moderately good beef-tea in the twenty-four hours, almost from the commencement of the fever, unless the symptoms indicate a more than ordinarily acute disease, and consequently a more restricted regimen. The beef-tea should be given in small portions at a time, and if it produce uncomfortable feelings or feverishness, it should be put aside for a few days, and gruel and panada substituted.

In enteric fever, fruits and subacid drinks should be almost entirely forbidden, from the risk of increasing the irritability of the bowels; and while speaking of drinks, I may mention that the large amount of fluids taken with the object of checking thirst, often produces much uneasiness and feeling of oppression from the mere mechanical distension of the stomach, and very often without quenching thirst. It is better that small quantities of fluid, or a little piece of ice, be taken now and then, than copious draughts gulped down without reference to the uneasy sensations that are likely to follow; and for the same reason soda-water and such-like drinks containing fixed air should be avoided.

Towards the middle or end of the second week, sometimes earlier, sometimes later, symptoms indicative of exhaustion appear. The pulse becomes soft and compressible; the skin cool, and often covered with clammy moisture; the patient feels weaker, less able to exert himself, or perhaps even to turn in bed and the tongue assumes a brown appearance. The necessity of a change of measures now becomes apparent. When the fever has been mild, it is generally sufficient to allow a more sustaining diet, stronger soups, or a small quantity of fish, or any of the tender meats, such as chicken or game, bearing in mind the irritable state of the bowels. At the same time a light tonic may be prescribed, those from the vegetable kingdom being by many preferred, though the mineral acids appear to me better suited; for example, a combination of the diluted nitric and muriatic acids in infusion or tincture of orange-peel. I have lately, on the suggestion of Professor Huss, given the diluted phosphoric acid; but I am not sensible of its having any superior advantages over the others. The barks of cinchona and cascarilla, the roots of gentian, chyretta, senega, calumba, serpentary, either in the form of infusion or tincture, may be selected at discretion, though the salts of quinine have superseded them in a great measure. Many even in the present day adhere to the old decoction of bark, under the belief that this preparation contains more of the real principles of the drug than the modern alkaloid. Battley's liquor cinchonæ, in fifteen to twenty minim doses, is an agreeable and elegant preparation.

In regard to the administration of wine and alcoholic fluids in the treatment of this stage of enteric fever, I would simply observe that they are too frequently prescribed on the mere dogma of routine; and even when the symptoms warrant their employment, a much smaller quantity is required in this than in typhus fever. Many patients pass through enteric fever without a single dose of wine, even when the disease is protracted, showing that its indiscriminate use is by no means warranted; and it should be kept in mind that in its progress there are, besides exhaustion, other processes at work in the system—local affections—which possibly may be ultimately the destroying cause, and these may be aggravated by the injudicious use of stimulants. On the other hand, it is often imperative to support the failing powers, disregarding the injury particular organs may have sustained—in short, to obviate the tendency to death,—and to hope that as the constitutional powers are invigorated, the secondary lesions will partake of the general improvement.

But special circumstances sometimes arise, requiring the administration of stimulants, without regard to the period of the fever. The powers may suddenly give way, rendering an immediate and powerful stimulus necessary, and none is more suitable, under such emergency, than brandy in half-ounce doses, and repeated at such intervals as may be necessary. Again, sometimes a few ounces of wine, or a proportional amount of brandy, are sufficient to resuscitate the failing powers, when it should either be withdrawn, or given occasionally only.

To sum up the question of the administration of wine in enteric fever, I would observe—1st. that it should not be prescribed indiscriminately, but as an occasional remedy in special cases; and, 2nd, when there is a doubt as to the propriety of giving or withholding wine, if the case be one of well-marked enteric fever, especially in the early stage, it will be safer to withhold it, at all events for a time; and 3rd, in every case, but especially when wine is not clearly indicated, the effect of the first few doses should be closely watched, and if the general complexion of the symptoms be improved, go on steadily, and watch again; if, however, it excite the patient, if restlessness and delirium be induced, if the tongue become more and more dry, the pulse more rapid and wiry, you may infer that wine is not suited to the case—at all events at its present stage—and should, therefore, be withdrawn.

Let me also allude to the importance of giving the wine at stated intervals, and only when the excitement is moderate. It is especially necessary to give it during the night, when there is often great exhaustion. A dose of wine injudicously given at this diurnal period is often followed by calm refreshing sleep; and hence the incalculable advantage of an interested experienced nurse, on whom so much responsibility—indeed the life of the patient—often rests.

We have seen that in the progress of enteric fever the poison acts with special intensity on individual organs, inducing the so called secondary affections or complications, and requiring special local treatment. It should, however, be kept in view, that these lesions, which are due rather to congestion than to inflammation, neither require nor bear the measures that are usually employed in primary or idiopathic inflammation.

The nervous system, on the whole, suffers more severely than any other organ, and this is what might be anticipated from its seldom escaping in the general febrile commotion, except, perhaps, in the very mildest cases. When, therefore, the cerebral affection becomes unduly prominent, indicated by constant pain in the head, especially if accompanied by flushing, delirium, intolerance of light, and sleeplessness, the loss of a few ounces of blood by cupping the temples, or the application of leeches behind the ears should not be omitted, while the hair should be removed from the head so as to allow a spirit lotion, or iced water, to be applied. The topical bleeding, however, is advisable only at the onset, or first appearance of the brain symptoms, and when the powers of the patient are able to sustain the loss of blood. When the brain affection assumes a form closely resembling delirium tremens—the patient being sleepless; the pulse rapid, soft, and compressible; the skin cool; the face pale; the delirium of the low, muttering character, with tremors and starting of the tendons—loss of blood would speedily annihilate the chance of recovery. The treatment for this condition of the brain consists of fomentations of warm vinegar-and water to the head; the application of blisters to the temples and forehead, and sinapisms to the extremities, supporting the strength at the same time by wine and nourishment, while the nervous system is tranquilized by a combination of antimony and opium in small doses, repeated at short intervals, according to the effect produced. For the introduction of this combination in the condition of the brain referred to, the profession is indebted to the late Dr. Graves, who appears to have employed it with the most happy results, and I am enabled to confirm his statements from my own experience. The best mode of prescribing it is, to add to eight ounces of a julep of the citrate of ammonia, four grains of tartar emetic and one drachm of the solution of the acetate of morphia, of which half an ounce is to be administered every two hours, until sleep is procured. The scalp should at the same time be enveloped in a spirit lotion and care taken that during sleep nourishment is administered at regular intervals, and not postponed until the patient awakes spontaneously. The repetition of the opiate in the way recommended must, of course, be left to the judgment of the medical attendant and the exigency of the case.

Some practitioners prefer the local administration of opium by enema in these cases, and no doubt this mode is a good one, as it tends not only to calm the nervous system, but at the same time to check the diarrhœa when present.

Of the throat affections, the most formidable is the laryngeal angina formerly alluded to. This dangerous

ous disease, which those who adopt the views of Rokitansky ascribe to the typhous deposit in the delicate structure of the glottis, is, happily, not frequently met with, for it is seldom arrested by even the most prompt treatment. The first approach of hoarseness, with painful deglutition and tenderness on pressing the region of the larynx externally, should excite suspicion, and no time ought to be lost in instituting such remedies as the local symptoms require, having always in view the powers of the patient and the probable endurance of the treatment. Gargles only produce fatigue and disappointment. Cupping on the nape of the neck, rapidly and dexterously performed, generally affords relief; and this should be followed by the application of the acetous solution of cantharidin under each angle of the jaw, avoiding the integuments covering the larynx; and, if the patient has strength for the effort, the vapor arising from hot water containing extract of conium should be conveyed to the throat by means of Read's valve inhaler. A large emollient poultice should be applied from ear to ear, and renewed every three hours or oftener. As to internal remedies, the exhibition of mercury, so manifestly efficacious in idiopathic angina of the larynx, is less trustworthy in the secondary form now under consideration, in consequence of the hazard of its irritating the bowels, and consequently renewing or increasing the local intestinal affection. If it be employed at all, the safer mode is by applying mercurial ointment to a portion of integument—the nape of the neck, for example—from which the cuticle has been removed by a blister. But a more safe and efficacious remedy will be found in antimonial preparations, especially the tartar emetic, of which from an eighth to a quarter of a grain may be given in solution every two, three, or four hours, according to the urgency of the case.

If, in spite of these measures, the symptoms continue unabated, or the aperture of the glottis become narrowed by œdematous effusion, the doom of the patient is no longer doubtful. I have in several instances suggested for the consideration of eminent surgical authorities the propriety of performing tracheotomy; but on weighing the balance of probabilities, and calmly considering the dangers to be apprehended from an operation, even under favorable circumstances hazardous, it has been abandoned.

We have seen that in a large proportion of cases, when enteric fever is well marked, the lungs are involved more or less seriously, the pulmonary affections being more common in the winter and spring.

If there be merely catarrh, it generally subsides in a few days, yielding apparently with the other symptoms, without special treatment. But it may pass into a more serious affection—bronchitis—which is easily recognised by the wheezing respiration, irritating cough, and local signs. If it be confined to the upper larger tubes, a sinapism or the acetous solution of cantharidin, applied under each clavicle, with a saline julep containing ipecacuanha wine and tincture of henbane or syrup of poppy, will generally be sufficient to remove it. But when the inflammation spreads to the smaller tubes, there is more difficulty in dealing with it, and more especially when from its latency, it has not attracted notice from the commencement. If the powers are adequate to the loss of a few ounces of blood from the chest, great relief is generally obtained; but this can only be resorted to when the general condition of the patient shows constitutional vigor. In doubtful cases, or when local bleeding cannot with safety be had recourse to, excellent effects follow the process of dry-cupping. The application of a blister to some part of the chest is indispensable; and if the bronchitic affection has extended to both lungs, one should be placed on either side of the chest. Small doses of antimonial wine in a saline julep, or a pill containing half a grain of ipecacuan with two of James's powder, and the like quantity of extract of hemlock or poppy, at intervals of four or six hours, are well suited, in addition to the local measures.

The bronchitic affection, when severe, often spreads to the air-cells, giving rise to pulmonary congestion, which soon passes into pneumonia, and may be distinguished by its physical signs. It is commonly confined to the base of one lung, but may involve both, and, according to its intensity, endanger the patient's safety. The treatment must be regulated not only by the extent, but by the duration of the affection; for it should be observed that we seldom meet with this or any form of pulmonary disease until the more advanced period of the fever, or during convalescence, when the powers are reduced, and hence the necessity of caution in the use of depletive measures. But unless there be special circumstances to forbid it, we must treat this secondary disease on the same principles as primary pneumonia, bearing in mind that we have to deal with it under very different circumstances. The measures embrace local abstraction of blood, or dry cupping, turpentine fomentation or blistering, and the exhibition of small doses of tartar emetic in combination with compound tincture of camphor.

When peritoneal inflammation arises in the progress of enteric fever, it originates from two causes —1st, from gradual extension of the ulcerative process in one of Peyer's patches until the peritoneum is reached, and subsequent inflammatory action in this membrane set up; 2ndly, from perforation of the intestine from the gradual process of ulcerative absorption. When it arises under the circumstances first mentioned, the management differs little from that of peritonitis arising under ordinary circumstances, and therefore recourse must be had to the application of leeches to the abdomen, and warm fomentations, after which a pill containing mercury and chalk with Dover's powder is to be given at intervals of three or four hours, supporting the strength at the same time by suitable nourishme ; The treatment of peritonitis resulting from intestinal perforation is palliative only; for though I have witnessed the recovery of two cases in which the distinctive signs of intestinal perforation were unequivocal, the termination is almost invariably fatal. Beware in this formidable lesion of the abstraction of blood by leeches, which, while it is inefficacious in controlling the inflammation, tends to exhaust the patient. The only remedy is opium, by which the excruciating pain and accompanying nervous irritation are calmed, while the peristaltic motion of the intestines is at the same time diminished. Two grains of solid opium in a pill should be given at once, and afterwards a single grain every hour or every second hour until an impression is made on the symptoms. If it accomplish nothing more, this remedy alleviates suffering and soothes the agonies of death.

ROYAL COLLEGE OF PHYSICIANS, LONDON.

Gulstonian Lectures

FOR 1860.

ON THE THEORY AND THERAPEUTICS

OF

CONVULSIVE DISEASES,

ESPECIALLY OF

EPILEPSY.

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LECTURE II.

(Concluded from July No.)

What, then, is the theoretical purport of the foregoing facts? To which view of muscular motion does it point? And first—for herein may be found the key to the whole matter—what is the theory of simple epilepsy to be deduced from the facts which concern the circulation and respiration of the epileptic?

1. No very certain conclusion is to be drawn from a consideration of the state of the circulation and respiration in the interparoxysmal period, except this—that plethora in the form so often exemplified in the butcher is never met with, and that feverish activity, even as an accident, is of rare occurrence. There are, indeed, cases of *epileptiform* disease, in which the circulation may exhibit at times some signs of activity; but these cases, as we shall see in the next lecture, present no objection to the conclusion which is forced upon us by the facts—that the pulse is rarely otherwise than weak and slow in the interparoxysmal period of simple epilepsy.

In the fit itself, the facts, when fairly read, admit of one conclusion, and one only. At the instant of the fall, a corpse-like pallor overspreads the countenance and the pulse dies out at the wrist—phenomena which seem to be only intelligible on the supposition that the arteries are nearly empty of red blood. A moment or two later, and the black and bloated face, the choking sounds, and the absolute suspension of all respiratory movements, show very plainly that the formation of red blood is arrested for the time. During the whole course of the convulsion, indeed, the state is one of suffocation. During the convulsion, that is to say, the supply of arterial blood is cut off at the fountain-head.

There is, however, one fact which, at first glance, might seem to show that there is an increased injection of arterial blood during the convulsion. Such injection is manifestly very imperfect at the onset of the fit, for upon no other supposition can we explain the corpse-like paleness of the countenance and the feeble and imperceptible pulse. But if the finger be kept upon the wrist during the convulsion, it will be found that the pulse will go on rising until it has acquired a force and fulness which it never had in the interparoxysmal period; and if the hand be placed on the breast, it will be found also that this rising of the pulse is accompanied by increased action of the heart. These facts are evident and unmistakable, but they do not show, as without reflection they might seem to do, and as they are often supposed to do, that *red blood* is being injected in greater quantity into the arteries during the convulsion.

When the process of respiration is arrested, the right side of the heart and the venous system generally are soon gorged and distended with black blood. Under these circumstances, indeed, the gorged and distended state of the right side of the heart may reach a point in which the folds of the tricuspid valve are forced widely apart, and an opening left through which the beatings of the ventricle are made to tell almost as much in driving the blood back through the auricle into the veins, as in sending it onward through the pulmonary artery into the lungs. But it is not right to suppose that the left side of the heart and the arterial trunks are empty of blood; and this may be readily verified by watching the changes which take place in the carotid and jugulars of a rabbit during the process of suffocation. On exposing the vessels, the artery is seen to be filled with red and the veins with black blood. On suffocating the animal by tying a ligature around its windpipe, the color of the blood in the artery darkens rapidly, and in about two minutes and a half it is every whit as black as that of the blood moving in the neighboring vein. Nor is the vein gorged and distended and the artery comparatively empty. On the contrary, the artery is felt to pulsate as strongly under the rush of black blood as it did previously under the rush of red blood. Nay, *the pulse of the black blood is actually stronger than the pulse of the red blood;* for, on testing with the hæmadynometer, the late Professor John Reid (who first directed attention to these facts, and who has investigated the condition of the circulation in asphyxia more carefully than any other observer) found the mercury highest at the moment when the blood in the artery had become thoroughly venous and black.

A full pulse and a throbbing heart, therefore, must be looked upon as natural accompaniments of asphyxia; and thus the full pulse and the throbbing heart of the epileptic paroxysm, instead of showing that a larger quantity of *red blood* is being injected into the arteries at the time, may show that these vessels are then laboring under a load of *black blood*, as they do in asphyxia. And that the full pulse and the throbbing heart of the epileptic paroxysm must have this latter significance is evident, for the livid black, and bloated head and neck, and the complete suspension of all respiratory changes, show very clearly that black and not red blood is coursing through the vessels at this time.

When the convulsion is over there is little to notice in the state of the circulation and respiration. When the spasms cease, the respiration is speedily re-established, and the re-admission of arterial blood into the system may be attended with some transient and inconsiderable febrile reaction; but this reaction has nothing to do with the convulsion, for when reaction is present convulsion is absent, and if convulsion returns, it is not until every trace of reaction has first taken its departure.

Regarding, therefore, these facts—the corpse-like paleness and the comparative pulselessness at the onset of the paroxysm, and the signs of positive and unequivocal suffocation by which this stage of paleness and pulselessness is succeeded—and remembering the previous arguments, which show that the convulsion is not to be ascribed to the presence of the stimulus of venous blood, there appears to be only one conclusion, and this is, that the convulsion of epilepsy is connected with the want of a due supply of arterial blood in the vessels.

Nor is it an objection to this view that the convulsions cease when the blood has become thoroughly deprived of its arterial properties. In order to discharge their office of conductors, it is certain that the nerves must be supplied with a sufficient quantity of arterial blood. If, for example, the principal vessel of a limb be tied, the nerves of that limb, wanting their due supply of blood, are unable to carry messages to the mind, or to transmit mandates from the mind to the muscles, until the collateral circulation is sufficiently established; and hence it is a fair inference that there must be a point in the process of suffocation where, wanting a due supply of arterial blood, the nerves must cease to be conductors, and where, consequently, the convulsions will come to an end; for, upon any hypothesis, the convulsions will come to an end when the nervous centres cease to be in proper connexion with the muscles.

But, it may be asked, is there no change in the blood itself? Is there not some important truth in the "humoral theory of epilepsy," as recently advanced in this place by the late lamented Dr. Todd? "I hold," said this distinguished physician, "that the peculiar features of an epileptic seizure are due to the gradual accumulation of a morbid material in the blood, until it reaches such an amount that it operates upon the brain, in, as it were, an explosive manner; in other words, the influence of this morbid matter, when in sufficient quantity, excites a highly polarized state of the brain, or of certain parts of it, and these discharge their nervous power upon certain other parts of the cerebro-spinal centre, in such a way as to give rise to the phenomena of a fit. A very analogous effect is that which results from the administration of strychnia, which is best seen in a cold-blooded animal, like the frog. You may administer the drug in very minute quantities for some time without producing any sensible effect; but when the poison has accumulated in the system up to a certain point, then the smallest increase of dose will immediately give rise to the peculiar convulsive phenomena. This is the humoral theory of epilepsy. It assumes that the essential derangement of health consists in the generation of a morbid matter, which infects the blood; and it supposes that this morbid matter has a special affinity for the spinal cord. The source of this morbid matter is probably in the nervous system, it may be in the brain itself. It may owe its origin to a disturbed nutrition—an imperfect secondary assimilation of that organ—and in its turn will create additional disturbance in the functions and nutrition of the brain." And again: "According to the humoral theory, the variety in the nature and severity of the fits depends on the quantity of the poisonous or morbid material, and on the part of the brain which it chiefly or primarily affects. If it affect primarily the hemispheres, and spend itself, as it were, on them alone, you have only the epileptic vertigo. If it effect primarily the region of the quadrigeminal bodies, or if the affection of the hemispheres extend to that region, then you have the epileptic fit fully developed."

This theory is based upon the well-known connexion between the presence of urea in the blood, or carbonate of ammonia resulting from the decomposition of urea—the result of defective renal action—and one form of epileptiform convulsion; and it might also have been based upon the connexion between convulsion and blood overloaded with bile. But if there is any evidence in these facts in favor of the existence of this hypothetical morbid material, there is none in favor of the idea that the *modus operandi* of the material is in exciting a highly polarized state of the brain, if by this state is meant anything like a condition of excitement. On the contrary, it is certain (as will be shown in the next lecture) that the action of the brain and of the nervous system generally is reduced to the very lowest ebb at the time when convulsion is brought about by the accumulation of urea and bile in the blood; and it is not less certain that strychnia, instead of acting as Dr. Todd supposes it to act—that is, by exciting a highly polarized state of certain parts of the nervous centres, acts by reducing the stimulating powers of the blood and by diminishing the electrical action of both nerve and muscle.

There is little doubt, however, that retained excretions must play an important part in the production of epilepsy. A free discharge in the office of excretion, not only in the kidneys and liver, but in every excretory organ, is essential to the preservation of healthy blood; and it may well be believed that an imperfect discharge of the office of excretion, *in one or other of the excretory organs*, may lead to the accumulation of effete matter in the blood, and that this accumulation of effete matter may be a not unimportant cause in bringing about an attack of epilepsy. But there is no reason for supposing that the blood under these circumstances becomes more stimulating. On the contrary, the conclusion which arises out of the history of the cases where the urine or bile is suppressed, is the natural conclusion, and this is, that blood thus altered is less fit to discharge its several offices; in other words, less stimulating.

Nor does there appear to be any reason for supposing that venous congestion has a more important part to play in the production of epilepsy than that which has been assigned to arterial injection. No doubt the veins of the brain and head generally are congested from a very early moment, but there is a moment antecedent to this in which the death-like pallor of the face is a sufficient proof that the veins were emptier than usual before they became congested. At any rate, the acknowledged anatomical difficulty must be overcome before it can be supposed that Dr. Marshall Hall's hypothesis of *trachelismus*—or the prevention of the return of blood from the brain by the spasm of certain muscles in the neck—has anything to do with the causation of epilepsy.

It would seem, then, as if there was something utterly uncongenial between epilepsy and arterial excitement. It would seem, indeed, as if the spasms, as well as the loss of consciousness and sensibility, were connected with want of arterial blood—empty vessels in the first instance, vessels filled with black blood afterwards. It is not improbable, also, that the blood may have been previously rendered less stimulating by the retention of something which ought to have been eliminated by one or other of the organs of excretion. In a word, the phenomena are entirely in harmony with the previous considerations respecting muscular motion; for according to them, the action of arterial blood is to antagonize contraction, and not to cause it.

2. Interrogating the nervous system, the facts are found to have that theoretical significance which the state of the circulation and respiration would lead us to expect.

These facts will scarcely warrant the idea that epilepsy is connected with anything approaching to over-action of the *brain proper*. On the contrary everything seems to point to a state which is the very opposite of over-activity. Thus, the comparative want of memory, intelligence, fancy, and purpose, which marks the interparoxysmal condition; the utter annihilation of everything mental in the fit itself; and the gloom and prostration following the fit, are facts which can have no double meaning.

Nor is a contrary opinion to be drawn from the morbid appearances which are disclosed after death. If these chance to indicate previous inflammation, it does not follow that convulsion had any direct connexion with the inflammation as inflammation; on the contrary, the convulsion may have happened before or after the inflammation, when the energies of the brain were prostrate or exhausted—an alternative which we shall see to be the correct one when we come to speak of epileptiform disease connected with special disease of the brain. And surely it is not possible to draw any but one conclusion from the appearances which are common to epilepsy and dementia—pallor of the grey substance, atrophy, chronic softening and induration, dropsical effusion and the rest?

But what of the state of the *medulla oblongata?* for, as Professor Schrœder Van der Kolk has well shown, the seat of the characteristic spasms, the bilateral character of the spasms, and the appearances presented after death, all point to this organ as one which is specially concerned in bringing about the epileptic paroxysm.

The spasms of epilepsy begin in muscles which receive nerves from the medulla oblongata—in muscles, that is to say, which are supplied by the facial, the accessory, the hypoglossal, and the portio minor trigemini; in slighter cases they are limited to these muscles. The spasms of the walls of the chest and abdomen, which are the most prominent and marked features in the complete attack of epilepsy, and which may be so fierce and unyielding as to cause fatal suffocation, also point to the same nervous centre; for a similar state of things is brought about by the action of a strong stimulus upon the great afferent nerve of this centre—the pneumogastric.

The bilateral character of the spasms is another argument that the medulla oblongata is especially affected in epilepsy. The lateral halves of this organ are connected in the most intimate manner by transverse fibres and commissures—much more intimately than the lateral halves of the brain and spinal cord; and hence it is that the corresponding nerves belonging to the two sides of the medulla oblongata are under a stronger physical necessity to act together than that which rules the corresponding nerves belonging to the two sides of the brain and spinal cord. In the case of the two latter centres, the nerves belonging to one side may be paralysed or otherwise affected without any obvious injury to the nerves of the other side; but not so in the case of the latter centre. Indeed, it is evident that the actions which emanate from the latter centre—the play of the features, the motion of the tongue, the vocal adjustments of the larynx, the respiratory movements, &c.—must at once come to an end unless there be the strictest sympathy and concert in the action of the corresponding nerves of the two sides. Now in epilepsy the spasms are always more or less *bilateral*, and for this reason, therefore, it may be supposed that they have some special connexion with a nervous centre of which one lateral half cannot act without the other.

The appearances after death point also to the medulla oblongata as especially concerned in the production of epilepsy. In an early stage of the disorder, we may fail to find any characteristic changes; but, in confirmed cases, the texture is harder than natural, from the interstitial deposit of a minutely-granular albuminous matter, or else softened, swollen, and exhibiting signs of evident fatty degeneration. The posterior half of the medulla oblongata is redder and more hyperæmic than it ought to be; and, on examining the bloodvessels in this congested portion, they are found to be of thrice their natural dimensions, and with their walls much thickened and altered—this dilatation and alteration being chiefly in the corpus olivare and in the course of the hypoglossus in the case of epileptics who bite their tongue, and in the course of the roots of the vagus in the case of epileptics who do not bite their tongue.

It is evident, then, that the medulla oblongata is especially affected in epilepsy; but it does not follow, as Professor Van der Kolk supposes, that the essential cause of the convulsive affection is to be found in an exalted sensibility and activity of the ganglionic cells of this centre.

In favor of this view—that epilepsy is dependent upon exalted sensibility and activity of the ganglionic cells—appeal has been made to the fact of spasms, to the presence of a full, bounding pulse, and to the freedom from attack which is for some time the fruit of an attack, particularly if this has been violent; but the answer is not necessarily that which Professor Van der Kolk supposes it to be. After what has been said about muscular motion in the first lecture, it is not possible to allow that spasm in itself is an argument in favor of exalted sensibility and activity in ganglionic cells. After what has just been said about the phenomena of the circulation in epilepsy, it is impossible to allow that the condition of the circulation favors spasm by bringing about a more active state of the medulla oblongata, (the functional activity of this, as of every other organ, being in direct proportion to the activity of the circulation of *red* blood in the organ;) for it has been seen that the bounding pulse to which reference is made, is filled with *black* blood, and not with red. Nor can the freedom from attack, which is for some time the fruit of an attack, be appealed to as a certain proof that the attack is the sign of the discharge of some overcharge of excitability previously present. On the contrary, it may be argued with some degree of plausibility, from certain facts which have to be mentioned in the next lecture, that the attack was preceded by depression of the circulation and innervation, that the convulsion supervened when this depression had reached a a certain point, and that the recurrence of the attack was prevented for a time by the state of reaction in the circulation and innervation, which is a consequence of the convulsion. The case may be one, indeed, of which the history of the rigors of ague may serve as no inapt illustration; for here we have, first, the circulation failing more and more until the bathos of the cold stage is reached; and, secondly, a state of reaction which banishes the rigors most effectually so long as it continues.

It would even seem as if appeal might be made to the appearances after death, and to the actual condition of the circulation in the fit, for positive arguments against the idea of anything approaching to exalted action of the medulla oblongata.

The signs of fatty degeneration can have but one significance—under-action, not over-action. The interstitial deposit, also, implies an equivalent absence of healthy nerve-structure, and so does the dilated condition of the bloodvessels; and this absence of nerve-structure must necessitate a corresponding absence of nervous action. The appearances after death, indeed, if they show anything, show that the medulla oblongata of the epileptic is *damaged in structure*, and because damaged in structure, *weaker in action*, than it ought to be.

The great argument against the idea of anything like over-action of the medulla oblongata in epilepsy, however, is to be found in the state of the circulation; for if, as may safely be assumed, the activity of any organ is in direct relation to the activity of the circulation of *red blood* in that organ, how far from anything like over action must be the state of things in which as is the case in the epileptic paroxysm, the vessels are at first comparatively empty of red, and afterwards completely filled with black blood?

Nor can the curious discovery of Dr. Brown-Séquard, that certain injuries of the spinal cord are followed by an epileptiform affection, be construed into an argument that there is anything like a state of exalted action of the *spinal cord* in epilepsy. This curious result, which is brought about by puncturing or dividing more or less completely almost any part of the spinal cord, is developed, not immediately, but in the course of three or four weeks after the injury. The attacks, once developed, occur spontaneously at various intervals, often several times a day; they may also be brought on by pinching or otherwise irritating the portion of the skin which corresponds to the region of the whiskers in man. This excitable spot is supplied by twigs belonging to the suborbitary, the auriculo-temporalis, the second, and perhaps the third, cervical nerves; and it is a curious fact, that the irritation which brings on a fit when applied to the skin in which these twigs terminate, has no such effect when applied to the twigs themselves. Any other part of the skin may be pinched or irritated with impunity, but this one spot can scarcely be touched without at once bringing on a fit.

These facts are very curious, and, in the main, very unintelligible; but this much at least is evident, that they do not countenance the idea of any over-action of the spinal cord in epilepsy. The fact that the epileptiform affection does not make its appearance until four or five weeks after the injury would appear to show very clearly that the fits have nothing to do with that local inflammation in the cord which may be supposed to have been set up in the first instance by the injury. After such a lapse of time, indeed, is it not the natural conclusion, that any over-action of the cord arising from the inflammation produced by the injury must have died out, and left the cord damaged, weakened, under-acting? Nor is a contrary conclusion to be drawn from the excitable condition of the nerves proceeding from the neighborhood of the cheek or cheeks; for both sides of the face are thus affected, if both sides of the spinal cord have been injured. What the full significance of this curious fact may be we may have yet to learn, but at any rate there is no reason to suppose that this excitable condition of the skin implies an over-acting condition of the nerves or nervous centres concerned in the phenomenon. The excitable portion of skin is not over-sensitive, for the animal manifests no signs of uneasiness when it is handled immediately after a fit. Over-sensitiveness, moreover, would seem to have nothing to do with the matter. At any rate, pain, and not convulsion, is the consequence of handling those portions of the skin of the animal which may have been rendered highly hyperæsthetic by the injury to the cord which brought on the convulsions. It is certain, also, that a somewhat similar condition of excitability is brought on when, as in several experiments related in the first lecture *ante.* June–July, the skin is cut off from the full influence of the nervous centres; and hence the natural inference would be, that the action of the nervous centres in the epileptic guinea-pig is *minus* rather *plus.*

As in the former instances, however, so here, we turn to the condition of the circulation and respiration in order to know what is the actual functional condition of the spinal cord in epilepsy; and so turning, we see that the action of the cord under these circumstances must be almost or altogether *nil.* For what action can there be when little or no arterial blood is injected into the vessels?

A similar argument will also dispose of the idea of over-activity of the *ganglia of the sympathetic system* as a cause of epilepsy. It is very possible that the contracted state of the arteries, which is implied by the death-like pallor of the countenance and the comparative pulselessness at the wrist, may show that the coats of the vessels are in a state of spasm; and it is also possible that the cause of this spasm may have to be sought in the sympathetic system; but it does not follow that over-action of this system is this cause. On the contrary, the experiments of Drs. Kussmaul and Tenner already referred to show most conclusively that strong epileptiform convulsion is possible when the action of the sympathetic ganglia is entirely suspended by arresting the supply of blood to these organs.

And certainly no opposite conclusion is to be drawn from the vague and undefinable sensations or movements very varying in character, but all comprehended under the term *aura*—sensations of pain, numbness, tingling, or a feeling of cold vapor; movements of shuddering or spasm, beginning in a distant part and travelling towards the head; for the most probable interpretation of these symptoms is that of Dr. Watson—that they are in some degree analogous to the numb and tingling feelings which are the frequent precursors of paralysis and apoplexy, or to the globus of hysteria—phenomena which by the most perverse process of reasoning can scarcely be supposed to indicate other than a state of defective innervation somewhere.

But, it may be asked, is there nothing else? Is there no peculiar state of the nervous system in epilepsy? Is there no *morbid irritability?* In order to answer this question, it is necessary to ask another—What is morbid irritability? It is not inflammation; it is not fever; it is some indefinable and negative state which occurs frequently in teething, in worm disease, in uterine derangement, and in many other cases—a state in which the patient is unusually depressed by depressing influences, and unusually excited by exciting influences. But what is this state? Is it anything more than mere exhaustion? In difficult teething, the strength is worn away by pain and want of sleep; in worm disease, the parasites help to starve and exhaust the system; in uterine derangement, the health is undermined, in all probability, by pain and by sanguineous or other discharges. In each case there is unequivocal exhaustion of body and mind, and the signs of morbid irritability appear to be nothing more than the signs of such exhaustion. A weak person is more affected by the several agencies which act upon the body from within and from without, and he is so because he is without some of that innate strength which belongs to the strong person; and the person who is morbidly irrritable, is, in reality one who, for want of this principle of strength, responds impatiently to the several stimuli, whose office it is to elicit his vital phenomena. In a word, this undue morbid irritability may be nothing else than the natural consequence of that general want of power, the signs of which are written so legibly upon the vascular and nervous systems of the epileptic. There is no necessity, then, to look upon this morbid state of irritability as an evidence of the existence of any peculiar condition in some part of the nervous system; for, thus interpreted, it only shows that the state of muscular contraction is ill antagonized by nervous influence. Thus interpreted, indeed, morbid irritability only becomes another name for inefficient innervation.

The *theory of simple epilepsy,* therefore, which may be deduced from a consideration of the facts relating to the nervous system is in harmony with that to which we have been led by a review of the state of the circulation and respiration in the epileptic; and this theory is one which tallies as completely with the view of muscular motion set forth in the first lecture, as it disagrees with that commonly received opinion according to which the muscles are supposed to contract convulsively because they are subjected to excessive stimulation.

LECTURE III.

In the last lecture I spoke of *simple epilepsy,* and endeavored to show that the facts are more in accordance with the theory of muscular motion propounded in the first lecture than with that ordinarily received theory which would ascribe the convulsion to over-stimulation on the part of one or other of the nervous centres. In doing this, I insisted particularly upon the *asphyxial state* of the circulation and respiration, and argued that the *want of red blood during convulsion* must necessitate at that time a corresponding *want of action in every one of the nervous centres.* In the present lecture I propose to continue the inquiry, and see whether the same theory is applicable to convulsive diseases generally. I also propose to add a few words upon the therapeutics of these maladies.

I.—THE THEORY OF CONVULSIVE DISEASES GENERALLY.

In proceeding to a cursory examination of convulsive diseases generally, I shall divide these diseases into three categories, of which the distinctive signs respectively are tremor, convulsion, and spasm. In the examination itself, I shall do as I did when speaking of simple epilepsy, and consider, first, the condition of the circulation and respiration, and afterwards review the several nervous phenomena, other than tremor, convulsion, or spasm, which must not be passed by in silence.

I. The Theory of Tremor.

The category of convulsive diseases of which the distinctive mark is *tremor*, includes the tremblings of delicate and aged persons, of paralysis agitans, of delirium tremens, the rigors and subsultus of fevers, and the shakings of slow mercurial poisoning.

1. The state of the circulation and respiration in these several conditions is sufficiently obvious. There is no doubt that both these functions are much depressed during *common trembling;* for this is evident, as well in the paleness and chilliness of the person trembling as in the decided relief afforded by wine. In *delirium tremens*, the perspiring skin, the cold hand, the quick, compressible, fluttering pulse, are all significant and unmistakable facts. It is evident, also, that the trembling is connected with this state of things; for if the dry skin and excited pulse of true meningitis make their appearance, the trembling is at an end. On the other hand, an argument to the same effect is to be found in the fact that tremor is exaggerated into subsultus, or even into convulsion, as the heart and pulse fail in the downward course of the disorder. *Rigor*, moreover, is coincident with a sense of coldness, a feeble pulse, a sunken countenance, a corrugated skin, and *subsultus*, with a pulse faltering in its final throes; and that this coincidence is not accidental, is seen in the fact that rigor disappears as the pulse and warmth return, and that subsultus may be checked for the time by the use of wine. And in *mercurial tremor*, an inference as to the real state of the circulation may be drawn from the general practice prevailing amongst the subjects of this disorder of resorting to gin and other stimulants to make themselves steady.

2. The nervous phenomena, other than tremor, are in accordance with the foregoing facts. In a bout of *ordinary trembling* the mental faculties are all unstrung; and in the permanent and extremest form of this trouble, as in *paralysis agitans*, they have altogether succumbed before the inroads of age or disease, and the sufferer lives only to sleep and eat. In *delirium tremens* the mental state is passive in every point of view. The patient lies unmanned, as it were, before some dim phantom of evil; or if not—if, that is to say, active delirium takes the place of the delirium tremens, and other symptoms betoken the existence of active inflammation—then the affection ceases to be delirium *tremens*, for the trembling has disappeared. In the initial *rigors* of fever, the mental state is one of dejection, languor, stupor; in *subsultus*, it is one of vague dreaminess, or of drowsiness not far removed from mortal sleep. In *slow mercurial poisoning*, the failure of the mental power keeps pace with the decay of the bodily strength, and the condition is one of premature old age.

In the different forms of tremor, therefore, the state of the nervous system, as reflected in the condition of the mind, is one of comparative inactivity. Nor is it easy to suppose that the condition of the brain is different from that of any other part of the nervous system; for if a due supply of blood be necessary to the due exercise of the different nervous functions, as it undoubtedly is, then it follows that the medulla oblongata, the spinal cord, and every other nervous centre, must be in a similar state of comparative inaction during trembling.

II. The Theroy of Convulsion.

The second category, in which *convulsion* is the distinctive feature of the muscular disturbance, is divided naturally into two sections by the absence or presence of consciousness during the convulsion. Where the consciousness is preserved, the convulsion may be called *simple;* where consciousness is in abeyance, the convulsion is *epileptiform. Simple convulsion* occurs in hysteria, in chorea, and in those strange affections which take an intermediate position between the two, as the dance of St. Vitus and St. John, tarantism, and other affections of the kind. *Epileptiform convulsion* includes the convulsion connected with certain diseases of the brain—chronic softening, chronic meningitis, tumour, induration, hypertrophy, atrophy, congestion, apoplexy, inflammation,—with fever, with uræmia and other suppressed secretions, with "irritation" in the gums and elsewhere, and with death from hæmorrhage and other causes.

A. *The Theory of Simple Convulsion.*

1. The pulse of persons who suffer from *hysteric convulsion* is generally soft, quick, and variable. The skin is frequently pale, and the hands and feet are often subject to chilblains, even when the weather is not very cold. Nor is there any real excitement of the circulation during the paroxysm. Indeed, the mode of breathing, which is slow, embarrassed, and accompanied by deep sobs and hiccup, is altogether incompatible with anything like excitement in the circulation. There is, moreover, some reason to believe that unnecessary stress has been laid upon a disposition to inflammation as one of the characters of hysterical subjects; but, be this as it may, there is no reason for supposing that any inflammatory disturbance of the circulation in any organ has anything to do with the symptom with which we are here concerned—the convulsion.

As in hysteria, so in *chorea*, the circulation is subject to considerable fluctuations, but the habitual state is one of marked depression. The pulse most generally is quick and weak, and the heart is readily thrown in a state of palpitation. In many cases, also, as additional evidences of a feeble circulation, the face, lips, gums, and tongue are pale, the skin is pasty, and in extreme cases the serous cavities are more or less water-logged. In some instances there may be all the signs of actual chlorosis; in other instances there may be predisposition to rheumatic fever, but this predisposition cannot be urged as an objection to the idea, now very generally admitted, that chorea is essentially a feverless malady; for it is certain that chorea is never coincident with rheumatic fever.

2. The habitually feeble state of the brain in persons subject to *hysteric convulsion* is shown in a variety of ways—indecision, irresoluteness, fickleness, pliability, over-sensitiveness, fidgetiness, and so on. And in the fit the will is altogether in abeyance, and the mental state is one approaching very closely to unconsciousness. The condition of the circulation at the time of the convulsion is also incompatible with any but a very low degree of action in any one of the nervous centres. Nor is it necessary to suppose that the uterus has anything to do with hysteric convulsion beyond this—that many common and important causes of weakness and exhaustion refer more or less directly to this organ.

The subjects of *chorea* present the same evidences of mental feebleness as those which are met with in hysteria—the same vacillation, irrationality, inordinate sensitiveness, timidity, fretfulness, irritability. It is to be supposed, also, that the mental state reflects the state of all the nervous centres, for the circulation is manifestly unequal to maintain the action of these centres at the normal pitch. Nor is any contrary evidence presented after death. In a certain number of cases, no doubt, traces of inflammatory action have been found in or on the brain or spinal cord; but as such traces are not found in the majority of cases, it is evident that inflammation of the brain or cord cannot be regarded as essential to chorea. What the occasional traces of inflammation may signify is another matter. It may be that the inflammation preceded the chorea, and left the nervous centre damaged, and to that extent weakened; and this opinion would not seem to be improbable where the signs of mischief were evidently of no very recent date. It may be that the inflammation has been a consequence rather than a cause of the chorea —the nervous centres in connexion with the muscles, like the muscles themselves, breaking up, as it were, from sheer fatigue. At all events, it may be seen now, and will be seen more distinctly presently, that inflammation of the brain or cord is not to be regarded as a direct cause of any kind of choreic movement.

B. *The Theory of Epileptiform Convulsion.*

1. In a case of general epileptiform convulsion, the state of the circulation is as far removed from anything like excitement as it is in simple epilepsy. There is, indeed, the same failure of the pulse at the commencement of the fit, and the same state of positive suffocation during the fit. In the case of partial epileptiform convulsion, the only difference is one of degree. In any case, the pulse is scarcely to be felt at the beginning of the paroxysm, and everything shows that the circulation is at a very low ebb; and if the pulse acquires any semblance of power as the paroxysm proceeds, the dusky and livid color of the face, the interrupted breathings, and other unequivocal signs of suffocation, afford sufficient proof that this phenomenon is due, not to the increased injection of red blood into the arteries, but to the impeded circulation of *black blood*, as explained in the last lecture.

Nor is there any evidence of a contrary character in the antecedent history of epileptiform convulsion, for in those cases in which the malady is of an inflammatory or febrile character, it will be seen that the fit occurs either in the period of prostration which precedes the development, or else in the period of collapse which comes on after the dying out, of the fever or inflammation.

In *chronic softening of the brain*, the habitual coldness of the hands and feet, the weakened and perhaps degenerated heart, the atheromatous or calcareous deposits in the arterial coats, are amongst the many signs which show the innate weakness of the circulation—a weakness to which fever and inflammation are alike uncongenial.

In *chronic meningitis*, as might be expected from the unmistakable evidences of a scrofulous habit, and from the state of weakness and exhaustion which are so generally present, the pulse, for the most part is quick, weak, and much affected by changes of posture. There may be some hectic excitement in the evening, the cheeks flushing, the eyes shining, and the aching head becoming a little hotter than it was before; but this faint excitement is not sufficient to raise the pulse to a normal pitch of activity. In no case, indeed, is this reaction of the circulation a marked and conspicuous phenomenon, and in the majority of instances it is scarcely sufficient to impart even a semblance of power to the weak and feverless pulse. And if there is little vascular excitement in ordinary chronic meningitis, there is, if possible, less in that form of the disease which is known as *chronic hydrocephalus*.

In *tumour of the brain* the pulse is quick, weak, irritable, fluctuating, or if not, it will be so as soon as pain, want of sleep, and despondency—common symptoms of tumour—have had time to bear their natural fruit of weakness and exhaustion.

In *induration of the brain*, such as is met with in chronic lead-poisoning, &c., the phenomena presented by the circulation differ very little, if at all, from those which occur in advanced stages of ordinary epilepsy, and any difference there may be, is one which indicates a state still more fully removed from fever.

In *atrophy of the brain*, as in simple epilepsy, there is no evidence of anything like excitement in the circulation.

In *congestion of the brain*, the head and face are congested and dusky, the lips purplish, the jugulars full, the pulse and respiration slow and labored, the hands and feet habitually colder than the head. There are, indeed, many evident signs which show that the circulation is not carried on with proper vigor, and which appear to point to imperfect arterialization of the blood as one cause of this defect.

In *apoplexy* the convulsion is most apt to happen at the end rather than at the beginning of the period of coma, when the purpled lips and the inadequate breathings show that the respiratory changes are rapidly failing. Or, if it happens at the beginning, it is in those forms of apoplexy in which the condition of the circulation at the time is more akin to collapse than anything else, and not in those forms in which there is an excited pulse, and strong determination of blood to the head.

In *inflammation of the brain*, the condition of the circulation may vary a good deal with respect to the inflammation, but little with respect to the convulsion.

Simple meningitis begins with paleness of the skin, a feeble, depressed pulse, cutis anserina, vomiting, rigors, perhaps convulsion. Then follow rapidly the symptoms of high febrile reaction and cerebral inflammation, the pulse becoming hard and frequent, the breathings irregular and oppressed, the skin, particularly the skin of the head, hot and burning. After continuing for two or three days, these symptoms of high febrile reaction give place to an opposite state of things, in which the pulse loses its force, and becomes weak, small, irregular, and the breathings are interrupted by frequent sighs and pauses. Or, if at this time the pulse retains any degree of resistance, it is evident, from the dusky color of the skin and the suspirious and labored respiration, that the whole of this resistance is not due to the injection of arterial blood into the artery. Now it is in this stage of collapse, or semi-suffocation, which follows, or else in the cold stage which precedes, the febrile and inflammatory excitement, and never during the actual period of excitement, that the convulsion happens. And this rule is constant. Indeed, the history of simple meningitis shows most conclusively that vascular excitement is as incompatible with convulsion as it is with rigor and subsultus.

In *tubercular meningitis*, the pulse is weak and variable from the first, now quick, now comparatively slow, rising in frequency when the head is raised from the pillow, and falling when it is laid down again; and from the very first the respiration is irregular, unequal, and interrupted with frequent sighs and pauses. For some time there may be a little disturbance of a hectic character, particularly in the evening, but this soon comes to an end, and the prostrate pulse forgets to put on even this faint semblance of fever. In some cases, there may, indeed, be a short stage of fever, and something like active cerebral inflammation, especially in young children; but as a rule the symptoms are altogether of a passive, non-febrile, non-inflammatory character. In any case, however, the convulsion is connected with a depressed state of the circulation, and never with febrile and inflammatory excitement, if such state there be.

In *rheumatic meningitis*, also, there is little or no febrile excitement from the beginning, and the pulse has become powerless and utterly weak before the convulsion happens.

In *general cerebritis*, the pulse, at first slow, soon becomes variable and readily affected by changes of posture; the respiration, also, is very variable and suspirious. From the first, indeed, there is scarcely any fever, and little heat of head, except the phenomena of cerebritis are mixed up with those of simple meningitis; but if such symptoms are present, they soon pass off, and give place to symptoms of slow sinking—a state in which hour by hour the breathing is more interrupted with sighs and pauses, and the pulse more powerless, unless it may have a fictitious power from the presence of more or less black blood in the artery, in which case the dusky countenance and the purple lips will show very clearly that any increased injection of red blood is at this time out of the question.

In *partial cerebritis* there is even less febrile disturbance than in general cerebritis, and at no stage of the malady is there anything like increased vascular action.

The immediate antecedents of the epileptiform convulsion which may attend upon the onset of *fever* are—paleness of the face, coldness of the hands and feet, a feeble, soft, and fluctuating pulse, a respiration that is short, accelerated, and interrupted by frequent sighs. The immediate antecedents of the convulsion which may attend upon the end of fever are, a weak and thready pulse, a frigid hand, and lungs too much gorged with blood to allow of any proper respiration —a state in which, febrile reaction having long since died out, the hand of death is already upon the heart or brain. The convulsion which may attend upon fever, indeed, may take the place either of rigor or subsultus, and like these forms of muscular disturbance, it is associated, not with the state of febrile excitement, but with a state of depression, which is as much below the natural standard as any febrile excitement is above that standard.

In the convulsion connected with *dentition*, there may have been little or no previous fever, and by quick degrees the pulse may have become excessively weak, or there may have been symptoms of cerebral inflammation with high fever, and afterwards a state bordering very closely upon collapse. In any case, the immediate antecedents of the fit are indicative of great vascular depression—great vascular depression brought on slowly without any very obvious fever or determination of blood to the head, or else that which precedes or succeeds active fever and determination. And so likewise with the convulsion which is connected with *worms* or other sources of irritation in the alimentary canal; for if there has been any febrile disturbance, this has passed off, and left the patient not only feverless, but pale and chilly. Nor is it otherwise with those forms of convulsion which are referred to *uterine irritation*. In the convulsion connected with menstruation, the circulation is in the state in which it is in ordinary epilepsy or in ordinary hysteria; and a similar remark applies to several of the convulsions which may happen in the course of pregnancy. In the convulsion of flooding, the face and even the tongue is blanched, the hand frigid, the body bathed in cold sweat, the pulse fluttering and well-nigh imperceptible, the breathing a continous sigh or gasp. In the convulsion occurring in labour without flooding, the head is often greatly congested, and the aëration of the blood seriously interfered with, partly in consequence of the way in which the lungs sympathize with the semi-comatose brain, and partly because the regular expansions of the chest are interfered with by the constant efforts at straining. In such a case the pulse may be full; but if so, the venous color of the lips will show that this fulness is due to the circulation of black blood rather than to the circulation of red blood in the vessels. In the convulsion which may happen during puerperal fever, the vascular antecedents are the same as those which may happen towards the end of any fever. And lastly, the condition of the circulation before the convulsion which is referred to "irritation" of a sexual character, if it differs at all from that which is met with in ordinary epilepsy, differs only in being one of still deeper depression.

Nor is there any trace of vascular excitement before the convulsion which may happen in the *moribund state*. In the convulsion attending death by hæmorrhage or asthenia, the blanched face and tongue, the frigid hand, the sighing or gasping respiration, the faltering pulse, are signs which require no comment; and in the convulsion attending death by speedy or gradual suffocation, the state of things is equally opposed to the idea of vascular excitement; for how—to ask this question once more—can vascular excitement and a state of suffocation be compatible conditions?

In a word, there is no instance in which epileptiform convulsion can be supposed to have any connexion with an excited state of the vascular system, and there are many instances in which the circulation is as far as possible removed from such a state; and the only conclusion which can be drawn from these facts is one which seems to harmonize with the physiological premises, and with the previous conclusions respecting simple epilepsy.

2. In a case of general epileptiform convulsion, the mental faculties are as completely suspended as they are in epilepsy. The dilated pupil remains immovable under the brightest light; the ear is deaf to the loudest noise; and when the patient recovers—if he do recover—his memory is absolutely blank as to everything which happened during the fit. In partial epileptiform convulsion, such as occurs not unfrequently in chronic softening or tumour of the brain, as in partial epileptic convulsion, the mental faculties may not be altogether suspended, and the memory is occasionally able to recall some of the circumstances attending the fit. In the case of general epileptiform convulsion, therefore, the condition of the mind is evidently one of *inaction*, and not of action. Of this there is no doubt. Nor can there be any doubt that the state of the mind is one of comparative inaction in partial epileptiform convulsion; for the utter bewilderment, the inability to collect and control the thoughts, the trepidation, and the want of power over the muscles, are all signs which cannot be mistaken.

It would seem, also, that the brain is not less inactive than every other centre of nervous action, for (to repeat the argument already used so often) none but the very lowest degree of action is compatible with the circulation of unarterialized blood in the vessels. Nor is there anything contradictory to this conclusion in the facts which remain to be mentioned.

In *chronic softening of the brain* the fits are preceded by unquestionable, and often very marked, impairment of the mental faculties, and in some cases the mind may be a total wreck. Fire and energy are dying out and dulness and drowsiness point to the coming coma, of which they are the forecast shadows. The brain, also, is blighted, not inflamed. It is pallid, whiter than it ought to be, deficient in red spots, and in parts softer than natural; and, on microscopic examination, the softened substance is found to consist of broken-down brain tissue, with a greater or less number of cells containing oil, and sometimes reddened with blood-corpuscles, (for hæmorrhage is a common consequence of softening,) but without any of the products of true inflammation,—exudation and pus-corpuscles.

Impairment of the mental faculties, progressively increasing, is also a prominent symptom in *chronic meningitis*,—impairment which would seem to be more marked by peevishness, impatience, fidgetiness, and a disposition to delirium, than by dulness. The mind wanders a little in the evening or at night, and not unfrequently this wandering may settle down into insanity. Or there may be no positive symptoms of any kind. After death the principal sign of disorder is effusion of serum beneath the arachnoid or into the ventricles, and this is often the only sign. In some instances there may be congestion of the pia mater, or evidences of tubercular degeneration in this membrane and in the contiguous parts of the brain; but, as a rule, the appearances are altogether negative. Indeed, in some instances, where the quantity of effused fluid is large, as in chronic hydrocephalus, the brain has a blanched, bloodless appearance, and the effused fluid is much less rich in solid constituents than the serum of the blood—a fact which is somewhat calculated to show that inflammation has no share in its production.

In the majority of cases of *tumour*, the intelligence does not appear to suffer in any very marked manner, and when it is otherwise, it is owing, in some degree at least, to the presence of chronic meningitis. The pain, however, the want of sleep, the depression of spirits, all combine to exhaust the brain, and this exhaustion is generally shown by vagueness in the ideas, by inability to fix the thoughts, or in some other manner. Nor is the pain, which is usually so very prominent and distressing a symptom, an objection to the idea, that the brain is acting inefficiently in these cases. In many cases, indeed, pain in the head is a sign that the brain is insufficiently supplied with arterial blood, for it ceases, and gives place to delirium, when the arterial injection increases. Nay, in some instances there is reason to believe that the nervous energy is *lessened* during pain, and that pain may be as much a sign of want of action in a sentient nerve as spasm is a sign of want of action in a motor nerve. At any rate Professor du Bois-Raymond has shown that the nerve-current in the nerve of a frog fails when the cutaneous ramifications of the nerve are subjected to a treatment which must give rise to pain. But be this as it may in other instances, in tumour of the brain it must be difficult to regard pain as a sign of over-action, for the companion symptoms during life, and appearances after death, are alike opposed to such a conclusion.

In *induration of the brain*, there is as little evidence of any excitement in the mental faculties as in any of the previous cases, probably less; and the condition of the brain after death affords no countenance to the idea of inflammation, for the brain is harder, darker in color, drier, more bloodless than it ought to be.

In cases of *atrophy of the brain*, where the condition is congenital, the probability is that the patient is idiotic as well as epileptic. In cases of *hypertrophy of the brain*, which cases are occasionally met with in children, while the bones are sufficiently yielding to allow expansion in the enclosed organ, the patients have not had any other inconvenience beyond the deformity—a faint argument, possibly, that want of brain, and therefore want of cerebral action, had really to do with the convulsion which would seem to be a constant phenomenon in atrophy of the brain.

A person suffering from *congestion of the brain* is less "bright" than he was, his conceptions are wanting in clearness, he is deficient in the power of attention and application, his sight is dim, is hearing dull and perplexed with ringing or rumbling sounds, he is drowsy, and feelings of weight in the head and pain are familiar troubles. Everything, indeed, indicates an oppressed and inactive brain.

In *apoplexy*, the mental antecedents are those of congestion or softening, not of inflammation as such. There would, indeed, appear to be a strange absence of inflammatory tendency in the brain in apoplexy; and if there are any evidences of inflammatory action around the clot, it will generally be found that this action was anterior to the hæmorrhage in point of time—that, in fact, the blood had escaped in consequence of a previously softened state of brain. It is possible, also, that an argument in favor of a tendency directly opposed to the idea of inflammation may be found in the fact pointed out by MM. Andral and Gavarral, that the blood in apoplexy is deficient in fibrine; for if the effect of inflammation be to increase the amount of fibrine contained in the blood, it may be supposed that a deficiency of fibrine indicates a state of things which is the reverse of inflammatory.

Nor is there the least reason to believe that any over-action of the brain is concerned in bringing about the convulsion which is connected with *inflammation of the brain*.

In *simple meningitis*, convulsion may attend upon the very onset of the disorder. In this case, it coincides with the cold stage which ushers in the true inflammatory reaction, a stage of which the mental signs are, depression, confusion, perhaps drowsiness. Or convulsion may attend upon the period of final prostration which follows the true inflammatory reaction, a period in which the mind is rapidly sinking towards a state of coma. Convulsion may occur at one or other of these times, but it never occurs in the true inflammatory stage, when the pupil is contracted to the size of a pin's head, when the impatient sensitiveness of the eye and ear is scarcely to be quieted by absolute darkness or silence, and while there is agonizing pain in the head or fierce delirium.

In *tubercular meningitis* the acute pain, the wild delirium, the intolerance of light or sound, which mark the outburst of simple meningitis, are wanting, and the course of the disease is insidious. In ordinary cases, where the symptoms set in thus stealthily, the usual period for the convulsion is after the brain and the system generally have given many unequivocal signs of exhaustion. In other cases, where there may be more marked febrile disturbance, the convulsion may happen in the initial cold stage, or after the febrile symptoms have calmed down and left the system in a jaded and exhausted state. As a rule, however, the idea of inflammation has as little to do with this affection as with phthisis pulmonalis; for when the diseased products are examined microscopically, they are found to consist, not of products of inflammation, but of the well-known elements of ordinary tubercle.

In *rheumatic meningitis* the convulsion observes the same rule, occurring either in the initial cold stage of the fever, and preceding the accession of the violent pain and delirium, or else waiting until the excitement has passed off, and the patient is left drowsy and semi-comatose.

In *general cerebritis* anything like wild delirium or acute pain in the head is absent, unless the affection is complicated with meningitis; and the characteristic state is dulness and drowsiness, rapidly progressing into typhoid prostration. In *partial cerebritis* the course of the disease is less rapid, and the downward progress may be interrupted by pauses of longer or shorter duration, but in other respects its characters are the same. From beginning to end, in either case, there are no evidences of an excited condition of brain to be gathered from an analysis of the mental phenomena, or at any rate there are no such evidences at the time the convulsions make their appearance.

In *fever*, convulsion may precede the establishment of the febrile excitement, in which case the mental state is one of great depression, oppression, prostration, stupefaction. In other words, it may occur in the initial period of collapse or rigor—the cold stage; or it may occur in the final period of prostration, when a few incoherent mutterings are the only traces of the previous delirium—when the last traces of mental action are rapidly succumbing to the drowsiness of approaching death. It may occur at one or other of these times, but not during the active period of fever.

In epileptiform convulsion depending upon *retention of urine*, the patient before the attack is drowsy, stupid, listless, despondent, his eyesight dim, his hearing dull, his speech drawling; and in convulsion depending upon *retention of bile* delirium is at an end, and drowsiness has become well-nigh comatose before the time for the attack has arrived.

In difficult *dentition* the brain is exhausted by pain and want of sleep, and drowsiness is taking the place of fretfulness and wakefulness before the occurrence of the fit; or if there be any cerebral inflammation, the fit follows the rule which has been already laid down. In *worms*, and in other forms of "irritation" in the alimentary canal, the mind as well as the body is not braced up to the proper pitch of health, and the patient is jaded, irritable, and drowsy. In convulsion arising from "*uterine irritation*" the mental state is that which belongs to either epilepsy or hysteria. In the convulsion of flooding the pupil is dilated, the thoughts are undefined and incoherent, and before the tossings change into convulsion the last trace of mental action has died out. In the other convulsion occurring during labour the brain is exhausted by pain and straining, and upon the point of lapsing into a state of coma when the convulsion happens. In the convulsion of true puerperal fever the mental condition is the same as in the convulsion of ordinary fever. And, lastly, the epileptiform convulsion referred to "sexual irritation" has the same mental accompaniments as ordinary epileptic or hysteric convulsion, one or other.

Nor can there be any doubt as to the condition of the brain connected with the *moribund state*. In death by hæmorrhage or asthenia, mental action fails *pari passû* with the flowing of the blood out of the vessels, or with the stagnation of the blood in the vessels, and the sufferer has become altogether insensible to pain and trouble before he is seized by the convulsion. And when death is brought about by suffocation, whether slowly or rapidly, it is no less certain that all mental action fails *pari passû* with the failure in the respiration, and that the last spark of mind has vanished before the time for the convulsion has arrived.

Whenever epileptiform convulsion makes its appearance, therefore, the attack is preceded by some evident failure in mental energy, and in several instances this failure is almost or altogether complete. Nor is it possible to suppose that this state of inaction is confined to that part of the nervous system which is the scene of mental life; for the depressed or oppressed state of the circulation which precedes the attack involves a corresponding degree of inaction in the complete chain of nervous centres.

In a word, there is nothing in the history of epileptiform convulsion which is not in perfect accordance with the history of simple epilepsy, or which may not be interpreted in the same manner.

(*To be concluded.*)

Cholera at Malaga.—An official notice has been issued by Lloyd's agent at Malaga, confirming the announcement of the presence of cholera there, and stating that that port, city, and neighborhood have just been officially declared as infected with epidemic cholera morbus, and that the sanitary authorities have determined to issue foul bills of health to all vessels clearing out from Malaga from this time until it shall please Divine Providence to dispose the cessation of the malady.

Original Papers.

ON A
CASE OF RUPTURE OF THE UTERUS.

By John H. Aldridge, M.D.,
Southampton.

The history of the case, ascertained from the patient herself, and from her friends, is as follows:—

Caroline S——, aged forty-one years, a tall, very robust woman. She does not remember ever having had any illness in her life, except at her confinements. She has been married eight years, and has given birth to seven children, two of whom were born dead. Her labours have generally been easy. This time she was taken in labour at twelve P.M., March 30th, 1859. The uterus contracted pretty strongly at the commencement, and after an hour or two she had several very powerful pains indeed, "sufficient," as she herself expressed it, "to have brought half-a-dozen children into the world." Suddenly, at three A.M. of March 31st, after such an above-described violent pain, she felt something give way in her abdomen with an audible snap (imitating the noise by snapping her finger and thumb), and she immediately exclaimed that "the child was born." At the time she heard the snap and felt something give way she was going up stairs, and a clot of blood passed from her. She went to bed soon afterwards. From this time there was a slight red discharge from the vagina, but at first it was nothing to excite any alarm. In the afternoon, a midwife made an examination, and gave it as her opinion that the woman was not yet in labour. *She never had any proper labour pains after three* A.M. *of 31st March.* She was tolerably well all this day, going about her household duties as usual, but rested badly at night, in consequence of which she lay down in bed on the following day (April 1st) and slept from ten A.M. until two P.M. She now felt constant, but not severe, pain at the lower part of the abdomen, *but had no regular labour pains.* The abdomen was also rather tender to the touch.

April 2nd.—Patient said she was a great deal better, and had passed a good night. She was going about her usual household work under the impression that her time was not quite up. The discharge was slightly increased in quantity, and was a little fœtid. The pain at the lower part of the abdomen was less.

From this time until the 5th of April the patient had remained in much the same condition. At this date, however, the discharge from the vagina was much increased, and had a very offensive odor. The abdomen was much distended, and very painful.

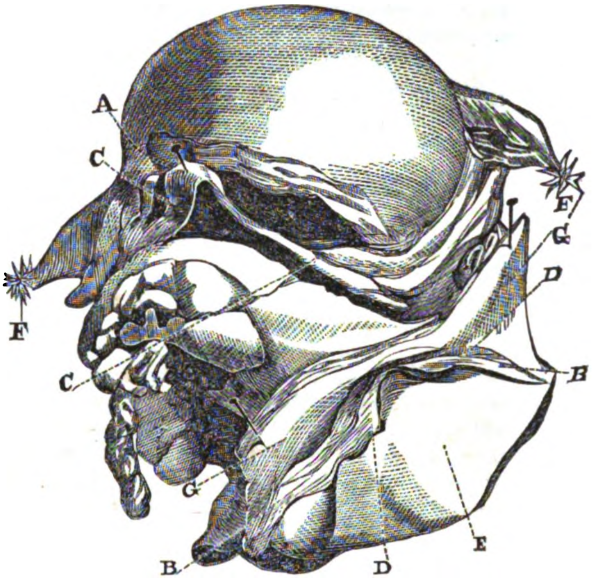
On the following day (the 6th) Dr. Scott and I visited the case together. On entering the room, we were at once struck with the horribly offensive odor, which we soon ascertained to be caused by the blackish-red, watery discharge from the vagina. The woman's face expressed great anxiety and pain. Her pulse was quick, but *full and strong*. She was lying on her back. Her abdomen was very large and distended; it was tympanitic as far down as the umbilicus; below this, dull on percussion. The belly was tender to the touch, so that on pressing it with the hand at all firmly she cried out. The fœtal heart was not to be heard anywhere. No part of the child could be felt through the walls of the abdomen, owing to the latter being so tense and blown up. On examination per vaginam, the os uteri was felt to be dilated to about the size of a half-crown, and to be quite flaccid. Two fingers could be easily passed through it, but no part of a child could be felt. We concluded that there must be rupture of the uterus.

Dr. William Bullar saw the case soon afterwards, and confirmed our diagnosis.

It was determined to bring away the child by the operation of turning. At three P.M. of the same day (the 6th) the operation was performed. The left hand was passed into the uterus, but it was only after the whole hand was quite through the os that the fingers came into contact with the *unbroken* bag of membranes, through which the limbs of the child could be felt. After rupture of the membranes, one leg was seized, and a full-sized male child was extracted without difficulty. It had a large œdematous scrotum, was very putrid, and must have been dead for days. After the removal of the child, the placenta was brought away. The latter was quite rotten, being merely a bag of membranes filled with putrid, fatty-looking matter. After this had been removed, the hand was passed up again, and came into contact with what at first seemed to be a piece of the placenta which had remained behind. On more careful examination, however, this was found to be of a firm, hard texture, feeling like a dog's tongue, and being distinctly attached to the uterine structure. It was therefore concluded that it was a piece of the ruptured uterus, which, indeed, at the post-mortem examination it proved to be.

The patient bore the operation well, but the abdomen never became much smaller. She sank gradually, and died on the 11th of April, five days after the operation, and eleven days after the supposed period of the rupture.

Autopsy on the day after death.—Only the abdomen was examined. On opening this, the cavity of the peritoneum was seen to contain a considerable quantity of the same blackish-red, watery, stinking, fluid, that had during life escaped per vaginam. The intestines were all adherent one to another, and were bound down by soft adhesions, showing severe, extensive, and recent peritonitis. The fundus of the uterus was protruding above the pubic symphysis, and on washing away the blackish-red fluid partially covering it, the rupture in the walls was immediately seen. The uterus, bladder, and rectum were removed together from the pelvis. The rupture was seen to extend from the right extremity of the fundus obliquely through the whole body and cervix of the organ, and for some distance into the upper wall of the vagina. The accompanying figure, by Mr. Samuel Stainer, of this town, shows very well the extent of injury to the womb. The cavity of the uterus was stuffed with tow, and a drawing was taken in order to show the line of rupture more distinctly. The tear is represented extending from A, the right extremity of the fundus, to B B, the upper wall of the vagina, dividing in its course into two halves, D D, the upper wall of the cervix. The line of rupture is irregular and somewhat jagged, and is seen to be, as it were, double, a thin shred, C C, in part composed of the whole thickness of the uterine wall, in part of mere peritoneum, being in the centre of the tear. So far as could be learned by the naked eye and by the microscope, there seemed to be no diseased state of the uterine walls at the ruptured portion, or in any other part of the organ. The womb was about the normal size five or six days after delivery. The bones of the pelvis were carefully examined and were found to be normal in every respect. There was no unusual prominence or roughness in any of them, which could have at all predisposed to the lesion of the womb. The conjugate and other diameters of the pelvis were of normal length.



Remarks.—It is more than likely that the rupture of the uterus in this case occurred early on the morning of the 31st March, when the patient experienced the extremely violent pains, and when she felt something give way in her belly, with an audible snap; for she stated distinctly that after three o'clock A. M. of the 31st, when the above occurrence took place, she never had any more *labour* pains. Of course at first the tear could not have been so extensive as is shown in the figure; for before the operation the os uteri was distinctly felt to be entire, and during its performance some difficulty was experienced in passing the hand through the os. In all likelihood the passing of the hand into the womb, and the extraction of the child, enlarged the rupture which already existed. That the rupture took place very early in the labour is evident from the history of the case, and from the fact of the membranes having been found unbroken at the time of the operation. It is difficult to assign any cause for the severe injury to the womb in this case, there having been none of the circumstances usually given as predisposing to rupture of the uterus. The woman had had many easy labours before this one. The bony pelvis was of normal dimensions. There was no history of a fall or of an injury to the womb during the pregnancy, and, so far as can be judged from the woman's account of her labour, the uterus had not been subjected for any unusual length of time to great pressure or attrition from its own expulsive efforts. If the rupture of the uterus really occurred on the morning of the 31st March, it is remarkable that the patient should have lived so long as eleven days after the accident. This circumstance clearly shows her to have been a woman of no ordinary strength of constitution.

ON THE TREATMENT OF GOITRE BY THE EXTERNAL APPLICATION OF THE BINIODIDE OF MERCURY.

By J. Mill Frodsham, M.D. Edin.,

Physician to the Farringdon General Dispensary
and Lying-in Charity.

Upwards of two years have now elapsed since Dr. Moreal, Inspector of Gaols, Bengal, brought before the notice of the profession the successful treatment, adopted by Captain Cunningham, of the 11th Irregular Cavalry. for the cure of goitre by the external application of the biniodide of mercury. Since then, so little notice has been taken of this remedy, that I am induced to recall attention to it as a most valuable agent in these otherwise tedious and too often intractable affections. I have myself had considerable opportunity of testing its efficacy, and always with a most fortunate result. A certain amount of difficulty is, however, experienced in its application, as the influence of the solar rays appears to be absolutely essential to its curative action, and therefore in this country it can only be adopted with perfect success during a few of the summer months. The following is the plan I have invariably pursued with the patients under my care :—

An ointment of the biniodide (biniodide of mercury, 16 grs. ; lard, 1 oz.) has been first rubbed into the swelling for several days. Then seizing the opportunity of a powerful mid-day sun, the patient has been exposed to its influence, the throat being thoroughly smeared with the same application, and the head well elevated. It is generally borne for upwards of an hour, when a severe *sensation* only of blistering is produced. The patient should then be allowed to return home, and cautioned *not to rub off* the ointment.

Dr. Moreal suggested the application of artificial heat ; and thinking it possibly might have a similar influence, though in a modified degree, I made several experiments, though, I regret to say, with but little success. In one case I caused the patient to sit before a large fire : in another, I held a hot flat iron a short distance off the swelling. In the latter case the pain was so great as to demand immediate discontinuance.

Some of the cases in which this treatment was most eminently successful had been of long standing, and all the usual remedies, both internal and external, had been tried in vain. One woman had suffered from the swelling for four years, and for upwards of one year had been taking the iodide of potassium internally, and applying the iodide-of-potassium ointment externally, but without deriving the slightest apparent benefit. The biniodide was only applied *once ;* and before the expiration of a month a diminution of two inches by measurement in the size of the tumour had taken place. At the end of six months no sign of the former disease was perceptible.

The superiority of this mode of treatment consists in its great cleanliness, its not discoloring the skin, and causing no external breach of surface, together with its speedy remedial action (one application generally sufficing). As to the *modus operandi*, whether it is due to rapid absorption, or to chemical changes, is, I believe, as yet undecided.

Upper Belford-place, June, 1860.

OBSERVATIONS
ON THE
TREATMENT OF ACUTE AND CHRONIC ALBUMINURIA.

By George Corfe, M.D. Lond.

During the last outbreak of cholera in London—namely, in 1854—many of its victims who recovered from the direful scourge were left the subjects of more or less permanent uræmia. Some of these cases proved fatal, and the mode of death differed but little from uræmic poisoning in the ordinary forms of morbus Brightii or albuminuria. The progressive and fatal steps of the disease were, insidious coma, total and permanent suppression of urine, a small pupil and a hazy cornea, a peculiar flabbiness on handling the fleshy parts of the body, and well-marked fumes of muriate of ammonia were formed, as a mirror, moistened with hydrochloric acid, was made to receive the exhaled breath of the patient. This latter pathological feature is induced by the non eliminated urea becoming converted in its elements to ammonia when it arrives at the pulmonary cells for exhalation, and is oftentimes a most valuable indication of the existence of uræmic poisoning. The frequent occurrence of albuminuria in hospital practice since 1854 has induced me to keep a record of many of the most interesting forms of this disease ; and in watching the progress of the affection, I have been led to group certain distinct phenomena, which will enable us to form an accurate basis, and serve as a diagnostic mark between the acute and chronic stages of this intractable malady. Such a desideratum appears the more necessary when we reflect how different the treatment should necessarily be in each form, and that by a judicious management of the acute, the direful ravages of a chronic stage are thereby obviated.

It may be stated, then, as a pretty general rule, that where the urine is scanty, the specific gravity variable from 1010 to 1020, the morning secretion (urina sanguinis) lighter than that of the afternoon (urina chyli), the albumen copious both by nitric acid and by heat, the tube-casts abundant, the urine smoky and frothy, with or without oil-corpuscles though the amount of dropsy be small, yet the disease is, under these circumstances, in its early and acute form.

On the other hand, a chronic stage may be readily diagnosed by the following physical signs:—The countenance has already become more or less cachectic; there is frequent nocturnal micturition; the albumen is scanty, perhaps altogether absent; the specific gravity rarely exceeds, 1010, and is persistent in weight; its acidity is so faint that it can scarcely be exhibited, and there is a strong tendency in it to pass into an alkalescent state under the smallest doses of alkaline remedies; the color is of the palest straw. The skin assumes a faint but distinct shining appearance, as though a thin layer of collodion or gum had been painted over its surface. There are frequent attacks of frontal headache; tinnitis aurium, lumbago, and general prostration of the system are also sequences of the acute form of the disease. It is by no means a rule that dropsy should supervene in such a change of structure as that which the kidneys undergo in the chronic form of albuminuria; indeed, this symptom is more frequently absent, but usually present in the majority of acute cases of the disease.

The pathological appearances of the two forms, the tendency to inflammation of the serous membranes, the frequent fatal attacks of renal epilepsy, and other cerebral disturbances from uræmic poisoning, have been pointed out by others, so that I need not dwell upon these phases of the disease. My special object is to give to the profession some of the results of a successful treatment of the acute and of the chronic form. Amongst several hundred cases which have passed under my notice in hospital practice, I cannot find from the notes on them that there was any connexion between this disease and scrofula. Dr. Bright considers the occurrence of tuberculosis with albuminuria to be "decidedly rare;" and on this account, perhaps, one may prefer the more frequent adoption of an antiphlogistic and powerful drastic treatment in the early stages, which would be inadmissible if experience and pathology led us to suspect a complication of tuberculosis with the disease.

In treating, therefore, of the acute stage, my experience justifies me in urging strongly the adoption of one of the two following lines of practice:—If the patient has had no previous attack, and has lived temperately, and was otherwise in good condition before the invasion of the disease, then I would recommend a small bleeding, so as to affect the pulse under the finger; and, after two hours, the exhibition of half an ounce of fresh-made infusion of digitalis every hour for three doses. Both the bleeding and the diuretic should be administered early in the day. After a pause of twenty-four or thirty six hours, according to the condition of the vascular system, the same dose should be repeated, and even to a third and fourth repetition, followed on each occasion by copious draughts of "nitre-drink," the form for making which is simply to dissolve a drachm of the nitrate of potash in a quart of thin barley-water, and a little "foots" sugar may be added to remove the mawkish taste. I have witnessed the most extraordinary results from this line of treatment; one instance of which will be seen quoted in Case 8. If the disease does not yield—that is to say, if the invasion of dropsy increases, the albumen is yet copious, the specific gravity high, the tube-casts numerous, and the urine scanty, instead of resorting to that mischievous and unscientific mode of attacking the enemy by stimulating congested kidneys, already semi-inflamed, with saline diuretics, (the evils of which practice by-the-bye I have too frequently seen displayed in a few days in the pathological theatre,) then a most valuable agent is to be found in the determined exhibition of elaterium, accompanied with daily dry-cupping to the loins, and a sudatorium at night. The form for exhibiting this drastic is the following:—Fresh extract of elaterium, half a grain; powdered capsicum, two grains; gamboge, three grains; soft extract of jalap, four grains; make two pills. One of these pills should be taken at six o'clock in the morning; the second at eight; and if no powerful drastic effect follows by nine A M., a third dose may be given. The intense vomiting and purgation which ensue, it must be acknowledged, are very trying to the patient; but he is amply rewarded for his suffering by a subsequent relief to all his distress, so that he has oftentimes begged for a repetition of the pills before it was thought advisable to put him to a second trial, even when such an heroic treatment has been met by heroic suffering. I am convinced that the value of this drug is only appreciated by a few physicians; and even where it has been employed the exhaustion consequent upon its action has deterred many practitioners from persevering in its use. But it ought to be borne in mind, that under such treatment the patient should be allowed a liberal quantity of animal food in the form chiefly of strong broths, with chops and steaks, together with a pint, at least, of stout or good ale, and vegetables, &c. daily.

I remember one instance amongst many which Dr. Watson was in the habit of mentioning to his class, when speaking of the use of this drug in albuminuria. He was summoned to attend in consultation a case of the above disease. "When I arrived there," he would observe, "I found the man overwhelmed with anassarcous swellings, his dyspnœa was most urgent, and there appeared to be no prospect of relief. However, I ascertained from the practitioner that he had tried everything but elaterium. I urged its use, and prescribed some to be given immediately. Four or five years after this occurrence I was again in consultation with the same practitioner, when he asked me if I recollected the case of albuminuria, and what I gave him, adding that it made a complete cure of the man. I referred to my private notes, feeling assured the chief drug was elaterium, and so it proved, and this was the form I administered it in:—One grain of extract of elaterium, dissolved in an ounce of spirit of nitric ether; a small spoonful to be taken every hour until the bowels have been well opened."

TWENTY-EIGHT ACUTE CASES.

No.	Sex.	Age.	Trade.	Ill.	Habits.		Urine.		Acid or alkaline.	Appearance.	Hæmatine.	Red Corpuscles.	Albumen.		Cause Assigned	Observations, Results, &c., and Treatment.
					Cleanly	Temperate	Sp. Gr.	Quantity.					NO5	Heat.		
1	M.	33	Smith	5 mths.	Dirty	Occasionally spirits	·18	Scanty	Acid	Smoky	Traces	None	Traces	Traces	Exposure to cold	Went out relieved. Elaterium in form of compound elaterium pill used.
2	M.	19	Pickler	2 mths.	Moderate	Temperate	·25 to ·46	Ditto	Ditto	Very smoky	Abund.	Traces	Copious	Copious	After an acute rheumatic attack	Went out convalescent, though traces of albumen were in urine.
3	M.	21	Driver	7 wks.	Ditto	Ditto	·12	Ditto	Ditto	Smoky	Traces	None	Ditto	Ditto	After gonorrhœa	Had rheumatic fever 3 years ago. Dropsy supervened soon after gonorrhœa was cured. Went out worse.
4	M.	42	Shopkeeper	3 wks	Ditto	Ditto	·20	Natural	Ditto	Muddy	Much	Traces	Much	Traces	Exposure to cold	Whilst in search of a situation. Relieved.
5	M.	32	Carman	4 mths.	Cleanly	Occasionally spirits	·16	Ditto	Ditto	Opague	About	Few	Cloudy	Floccnt	Rheumatic fever, 5 yrs.	Mitral valve murmur. Relieved.
6	M.	44	Painter	10 mths	Moderate	Freely of spirits	·18	Ditto	Ditto	Smoky	None	None	Copious	Copious	Exposure to cold	Free indulgence in drink. Returned in 2 months. Uremia : coma ; death.
7	M.	45	Cabdriver	6 wks.	Cleanly	Ditto	·20	Ordinary	Ditto	Smoky	Traces	Ditto	Traces	Traces	Ditto	Fatal in 18 days after admission.
8	M.	36	Cowman	4 wks.	Ditto	Never takes spirits	·12	Scanty	Ditto	Dark, like porter	Abund.	Many	Ditto	Ditto	Ditto	After a small bleeding and the use of infusion of digitalis. Diuresis set in abundantly. Urea in quantities in serum of blood.
9	M.	58	Musical Instrument Maker.	6 wks.	Moderate	Freely of Beer and spirits	·19	Much	Acid and alkaline	Darkish	Traces	None	Ditto	Ditto	Ditto	After walking from Manchester to London in search of work. Relieved.
10	M.	54	Ostler	6 wks.	Dirty	Freeely of beer and occasionally spirits	·18	Scanty	Acid	Smoky	None	Ditto	Ditto	Ditto	Ditto	Fatal in 27 days after admission. Small kidneys. Uremia.
11	F.	25	Married	1 mth.	Cleanly	Temperate	·28	Ditto	Ditto	Dark	Some	Trace	Ditto	Ditto	Hyperlactation and insufficient nourishment	Fatal in 14 days. Large flabby kidneys.
12	F.	41	Recently married	6 mths.	Ditto	Ditto	·25	Ditto	Ditto	Muddy	None	None	Ditto	Ditto	A few weeks after her marriage	Was in the hospital 15 years ago with the same, and went out well. Left the hospital worse.
13	F.	53	Widow	4 mths.	Ditto	Beer, and has had spirits	·8	Natural	Ditto	Amber colored	Ditto	Ditto	Slight	Slight	Doubtful	Went out with only slight relief to her symptoms.
14	F.	62	Married	14 wks.	Ditto	Temperate	·20	Plentiful	Ditto	Smoky	Traces	Ditto	Ditto	Ditto	Mental depression	Somewhat benefited before discharge.
15	F.	29	Married	3 wks.	Ditto	Ditto	·38	Scanty	Ditto	Ditto	Ditto	Ditto	Abund.	Abund.	Exposure to cold by wet feet	Abundance of sugar by liquor potassæ. Breasts full of milk and painful. Specific gravity rapidly sank as sugar diminished, and this ceased when the breasts were emptied. Dropsy simultaneously cured, and albumen disappeared.
16	M	12	Schoolboy	1 wk.	Ditto	Ditto	·20	Ditto	Ditto	Ditto	None	Ditto	Ditto	Ditto	Not known	Improved under small doses of sesquichloride of iron.
17	M.	32	Drayman	1 wk.	Moderate	Beer-drinker	·28	Ditto	Ditto	Turbid and smoky	Ditto	Ditto	Ditto	Some	Exposure to cold	Abundance of tube-casts were found on a microscopical examination.
18	M.	45	Navvy	9 mths.	Ditto	Ditto	·30	Ditto	Ditto	Amber	Ditto	Ditto	Faintly	Copious	Ditto	The deposit of albumen by N O5 is again dissolved by heat. Tube-casts numerous.
19	F.	59	Laundress	1 mth.	Ditto	Ditto	·20	Plentiful	Ditto	Porter-like	Abund.	Abund.	Both	Both	Ditto	Fatal in 3 weeks. Large, pale, and flabby kid neys. Tube-casts numerous.
20	M.	42	Ostler	1 mth.	Ditto	Gin and beer drinker	·12	Ditto	Ditto	Smoky	Slight	None	Ditto	Ditto	Ditto	One-half is solid in albumen by N O5 and by heat. Recovery partial.
21	M.	21	Porter	1 mth.	Cleanly	Ditto	·24	Ditto	Ditto	Rather so	None	Ditto	Ditto	Ditto	Ditto	Went out relieved.
22	M.	54	Farrier	1 mth.	Dirty	Occasionally beer drinker	·10	Ditto	Ditto	High colored	Some	Abund.	Ditto	Ditto	Ditto	Ditto, ditto.
23	M.	38	Ostler	2 mths.	Ditto	Gin and beer drinker	·12	Scanty	Ditto	Pale and smoky	None	None	Ditto	Ditto	Ditto	Granular kidneys ; pericarditis ; hypertrophy of the heart ; post-peritoneal hæmorrhage, escaping into the pleural cavity ; gout in arms and feet ; epileptic fit ; loss of vision ; contracted pupils : diarrhœa ; uremia ; death.
24	M.	32	Shipwright	1 mth.	Ditto.	Ditto	·22	Ditto	Ditto	Thick	Abund.	Slight	Ditto	Ditto	Ditto	Went out relieved ; albumen still abundant in urine.
25	F.	41	Housemaid	5 wks.	Ditto	Ditto	·22	Ditto	Ditto	Smoky	A trace	None	Ditto	Ditto	Ditto	Fatal in five weeks ; pale and mottled kidneys.
26	F.	33	Widow	1 wk.	Clean	Beer drinker	·28	Ditto	Ditto	Ditto	None	Ditto	Ditto	Ditto	.. ..	Disease of the kidneys ; dropsy and death in 2 mths.
27	M.	30	Baker	10 days	Ditto	Rum and beer drinker	·20	Ditto	Ditto	Like porter	Abund.	Some	Ditto	Ditto	.. ..	Lately from Scotland ; hours of labour at night in London, instead of by day as in Scotland. Ushered in with severe purpura. Much benefited by steel. Great anasarca.
28	F.	24	Servant	3 wks.	Cleanly	Occasionally spirits	·12	Very scanty	Ditto	Smoky	None	None	alb.	alb	.. –	Amaurosis coming on suddenly a week ago ; had a similar attack 2 years ago. Amaurosis continues (March 2, 1860).

TWELVE CHRONIC CASES.

No.	Sex.	Age.	Trade.	Ill.	Habits.		Urine.		Acid or Alkaline.	Appearance.	Hæmatine.	Red Corpuscles.	Albumen.		Cause. Assigned.	Observations, Results, &c., and Treatment.
					Cleanly	Temperate	Sp. Gr.	Quantity.					NO5	Heat.		
1	M.	50	Laborer	6 years	Very dirty	Freely of spirits	·7	Natural	Acid	Amber colored	None	None	None	Trace	Exposure	Died 7 days after admission, from œdema of the lungs; granular kidney.
2	M.	40	Painter	12 or 14 months	Moderate	Very freely of spirits	·10	Ditto	Ditto	Ditto	Ditto	Ditto	Trace	Ditto	Ditto	A notorious sot; has had frequent attacks of colica pictonum; uræmia; epilepsy; coma; death from cerebral hæmorrhage; granular degeneration.
3	M.	5	Schoolboy	6 wks	Clean	.. ..	·5	Ditto	Ditto	Opague	Ditto	Ditto	Ditto	Ditto	.. ..	In the progress of convalescence from scarlatina.
4	M.	42	Piano-forte maker	6 mths	Ditto	Very Temperate	·7	Ditto	Ditto	Amber colored	Ditto	Numerous	Some	None	Exposure	Originally attacked in hospital, 13 years ago; sallow surface; coma from uræmia; death; granular degeneration.
5	M.	62	Carpenter	4 mths.	Ditto	Doubtful	·12	Ditto	Alkaline.	Ditto	Ditto	None	None	Ditto	Ditto	Went out relieved.
6	M.	45	Hammerman	4 mths.	Ditto	Ditto	·14	Ditto	Ditto	Ditto	Ditto	Ditto	Ditto	Ditto	Ditto	Ditto, ditto.
7	F.	19	Servant	5 mths.	Ditto	Ditto	·6	Ditto	Acid	Ditto	Ditto	Ditto	Traces	Traces	.. ..	Coming on after the exhibition of mercury for syphilitic lichen.
8	M.	14	Schoolboy	6 wks.	Ditto	Ditto	·2	9 in 24 hours	Neutral	Palish straw colored	Ditto	Ditto	None	None	.. ..	It was questionable whether this was not a simple case of diuresis, as no albumen was ever found.
9	M.	45	Cabman	6 wks.	Dirty	A quart a day	·12	Natural	Ditto	Dirty straw colored	Traces	Ditto	Some	Traces	.. ..	Profuse old spirit-drinker; had been in hospital 2 years ago with the same; uræmia; coma; death: granular kidney.
10	M.	73	Servant	5 days	Very Dirty	Both spirits and beer	·6	More than natural	Ditto	Amber colored	None	Ditto	None	None	Exposure	Was in the hospital 4 years ago; got quite well in a fortnight under elaterium; now rapidly improving with tincture of sesquichlor. of iron.
11	M.	54	Coachman	6 or 8 months	Moderate	Both spirits and beer	·15	Natural	Acid	Brownish	Some	Some	Traces	Traces	.. ..	Has been ailing more or less 8 mths.; legs sloughing from œdema: heart hypertrophied; improved by tinct. sesquichl. of iron; result fatal.
12	M.	53	Blacksmith	18 to 20 months	Dirty	Spirits only	·8 to ·12	Ditto	Neutral	Straw colored	None	None	Ditto	Ditto	Not known	Fatal 10 days after admission; œdema pulmonum; hypertrophy of the heart; kidneys softened and mottled; tubular stricture scarcely seen; great accumulation of fat around the infundibula.

I have frequently used the same form with excellent benefit in children affected with the disease after scarlatina. As soon as the system has been thoroughly brought under the influence of the above remedy, immediate recourse should be had to another equally valuable agent—namely, the tincture of the sesquichloride of iron in half-drachm doses, and the most elegant and efficacious mode of exhibiting it is in a glassful of seltzer water. Allusion has already been made to the injudicious practice of giving stimulating saline diuretics in this stage of the disease, and it has repeatedly happened that hæmatine and red corpuscles have been voided, and finally suppression of urine has followed the use of such drugs, whereas an early and a discreet use of the remedies alluded to has been attended by a complete alleviation of the worst form of the disease. As the attack becomes more chronic in its nature, I have seen marked benefit follow the use of the syrup of iodide of iron in half-drachm and drachm doses, together with a generous animal diet, and a moderate use of good beer or porter, to the exclusion of all spirits. Drachm doses of cod-liver oil after each meal has proved a valuable adjuvant in the treatment of many severe chronic cases.

In the accompanying tables, the 1st case to the 28th were all acute cases. In the second table of 12 cases, they were all chronic; the males, as might be anticipated, being in the proportion of 3 1-3d to 1 in females. Case 8 is a sample of the value of digitalis after a small bleeding, as already mentioned; the Professor of Chemistry, Mr. Heisch, ascertained the amount of urea to be very considerable in the serum of the blood drawn. Case 15 was quite unique of its kind. The presence of sugar was repeatedly ascertained by the copper and the potash tests. The disappearance of the anasarca and the albumen when sugar was no longer met with in the urine was equally significant of the etiology of the disease in this young nursing mother. The amaurosis in Cases 23 and 28 came on suddenly; in the latter instance it was relieved to such an extent that the patient could creep about the wards alone, and I have since met him in the streets, but the amaurotic appearance of both eyes is more confirmed, and the sight is not at all improved. The pathological features in Case 23 were most valuable. Cardiac disease had evidently followed the onset of the attack, and the fatal pericarditis, accompanied with the extensive hæmorrhage into the two great serous cavities, were clearly the result of uræmia.

Amongst the chronic cases, the first on the list was the most speedy in its career I have ever witnessed. The large amount of urea in the serum of the blood and in the cerebral fluids; the marked white fumes over the mirror as he breathed on its surface, moistened with hydrochloric acid; the rapid engorgement of the whole pulmonary tissue with poisoned serum, were so many evidences of the excessive amount of uræmia in the system. No. 2 was a case I had watched upwards of twelve years. Like many in the same trade, he had taken spirits at an early age, under a belief that it killed the poisonous effects of lead, and thus he became a confirmed dram-drinker. His epileptic fits were of a most violent kind, and assumed the form of acute mania during their cession. Case 8 was considered to be rather one of diuresis than chronic albuminuria. Mr. Heisch ascertained that every 1000 parts of urine yielded six grains of urea—in other words, that though the quantity of urine was so great, yet the amount of urea did not fall below the average standard of health.

May, 1860.

A CLINICAL EXAMINATION
OF THE
VALUE OF THE OPERATION OF TURNING IN LABOUR OBSTRUCTED THROUGH COARCTATION OF THE PELVIC BRIM.

By Robert Barnes, M.D.,
Fellow of the Royal College of Physicians, Vice-President of the Obstetrical Society of London, Physician to the Royal Maternity Charity, Assistant Obstetric Physician to the London Hospital, etc.

(*Continued from July No.*)

Primipara; labour at term; conjugate diameter contracted to three inches; delivery by feet. Recovery of mother.

Case 3.—On the 29th November, 1859, I was called to a patient of the Royal Maternity Charity who was in labour for the first time at term. The midwife, on examining at eleven P.M. the day before, found a foot presenting, no pains, os slightly dilated. The os dilated more, but as the midwife found the labour had made no further progress, she sent for me at half past four A.M. The left foot was in the vagina, and the other was just within the os, which had expanded to the size of the rim of a wineglass, but was somewhat rigid. The promontory projected very much, narrowing the conjugate diameter. There being no expulsive action, and artificial delivery being unavoidable, I began extraction by the left foot. There was some obstruction by the doubling-up of the right leg just within the cervix, the projecting knee forming the apex of a wedge the base of which lay internally. The os was too rigid to admit the hand to pass and seize the foot, so I slipped a noose of tape over it; by pulling upon this in the axis of the cervix the leg was easily extricated. The extraction of the body and shoulders was effected by use of moderate force, expulsive pains aiding a little. The head lay above the brim in the right oblique diameter and entered in transverse diameter. For an hour, allowing intermissions, I was obliged to pull upon a towel passed over the neck and crossed in front of the chest, with nearly all the force I could exert, the midwife making counter-pressure on the pelvis, before the head could be brought through the outlet. It was a girl, of full size and development. The parietal and frontal bones of the right side, which had been in contact with the promontory of the sacrum, presented a deep depression, forming a mould of the promontory. The bones were partly broken and partly bent, so that measuring from the deepest part of the furrow to the opposite side of the head gave 3.″ This was the measure of the antero-posterior diameter. Possibly, from slight resiliency of the bones after release, the head had even a little recovered. The child was dead. After the birth of the child I introduced the whole hand into the pelvis to make an accurate exploration of its form and dimensions. The promontory projected, forming a sharp ridge, narrowing the brim to the extent described. The placenta was extracted in about ten minutes; the uterus contracted fairly. The mother took a sedative draught containing thirty minims of laudanum and an equal quantity of Hoffmann's elixir. She recovered without a bad symptom.

Commentary.—This case is an instance of a direct experiment presented by nature. Similar cases are not uncommon. Examples may be found in most of the older as well as more recent obstetric records. They could hardly fail to impress the observer with the greater facility of delivery when the head was the last part to enter a contracted brim. They would also suggest the expediency of imitating what appeared to be an example set by Nature herself, by deliberately resorting to podalic version as a means of delivery in obstructed labour where the head was the presenting part. This idea would be powerfully reinforced by the observation of women whose first child, presenting by the head, had been destroyed by perforation, and who had, owing to the happy interposition of nature in reversing the presentation, been safely delivered in subsequent labours, occurring prematurely or at term, of living children. Professor Simpson has collected several interesting cases of this kind from Smellie.

The particular case before us, although illustrative of several important points, does not, perhaps, very strikingly encourage us to adopt the practice we are discussing. Nothing was gained in the interest of fœtal life. There was reason to conclude that the child was alive before the engagement of its head in the brim. It probably perished from the compression and injury to which the brain was exposed, although examples are known of children being born alive and recovering after injury apparently as great. I should, however, undoubtedly have lessened the head had this part presented. In subsequent pregnancies, the obvious course to adopt with this woman is, to bring on labour at the end of seven or eight months, and to deliver by turning, should the natural powers be inadequate to the task of driving the presenting head through the pelvis. By this course, we may look for a result as happy as in Case 1. (See The Lancet, June, p. 490.) What we have to consider, when in the presence of a greatly contracted pelvis and a full-sized head, is not alone how much force and contusion the mother will bear and recover from, but rather what is the prospect of delivering a living child. But from this and similar cases we may learn that women make excellent recoveries after pressure so severe that the child is killed in the process. We may hence deduce as a reasonable conclusion, that the mother will safely bear that minor amount of pressure which attends the extraction of a living child. Now, the operation is not proposed with the object of delivering dead children. The problem to be solved, then, is—What are the conditions as to relative proportion between the brim and the head, as to expulsive forces and other circumstances, which shall justify the expectation of saving the child by turning, the forceps being excluded? I still postpone the attempt to answer this question. At present, I will only state, that here, as in most other questions in physiology, we are not to expect demonstrations of rigorous mathematical precision. I do not feel justified in affirming that a conjugate diameter of 3″ is the extreme limit of the application of turning. If rules of treatment could be drawn from the elaboration of averages and the doctrine of probabilities, then would the dogma of the closet statistician be of more clinical value than that of the skilled physician. We must be content to study patiently the lessons taught by individual cases, and, in the end, to leave much to the judgment of the practitioner.

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ON ALLARTON'S LITHOTOMY OPERATION.

By Nathaniel Ward, Esq, F.R.C.S.

ASSISTANT-SURGEON TO THE LONDON HOSPITAL.

The median operation of lithotomy has now been before the medical profession some time, and has on many occasions been put to the test of practice both in London and the provinces. It becomes therefore the pleasure, if not the duty, of the surgeon who has had the opportunity of being satisfied with it, to record his conviction, and to state his reasons for the adoption of this operation in the removal of small or average sized stones from the bladder, in preference to any of the varied modifications of lateral lithotomy as yet introduced to the profession. Prior to its introduction I employed for the few cases of calculus in the bladder that came under my care, that modification of the lateral operation planned and practised by the late Mr. Key, and adhered to by some of his successors, and which may be taken as an average sample of the difficulties attendant on the lateral operation, however performed. This method, if carried out according to the recommendation of its proposer, is divided into several stages, all of which require careful study before, and anxious attention during, the operation. A straight staff having been introduced into the *previously injected* bladder, the operator makes the lateral incision into the perinæum in the usual way. Having reached the groove in the staff through the membranous urethra, the cutting instrument is held with the extremity of the blade steadily but lightly in contact with the groove. The handle of the staff is then taken from the hand of the assistant, and the instrument drawn down on the knife, so as to form with the axis of its blade an acute angle. The left hand holding the staff, and the right the knife, in the relation mentioned, are next slightly inclined to the left side of the patient. The staff being then held steadily in the operator's left hand, the knife is forwarded by the right along the groove of the staff, through the membranous part of the urethra and the prostate gland, into the bladder, and is then withdrawn; the angle that it forms with the staff as it is leaving the viscus regulating the extent of incision in the prostate. The staff is then taken in the operator's right hand, and the left index finger, being passed along it and taking its place, is used as a guide for the forceps, which are next introduced, and the calculus is removed.

I have thus briefly described the details of the lateral operation by the straight staff, which I have selected as an example from amongst several modifications of the lateral operation had recourse to in the present day—none of which can, I think, be said to be less complicated—in order to show that lateral lithotomy generally, whether with the gorget or the knife, requires much preliminary study, and constant caution and care, in order to execute it with precision and without risk; the chief dangers being the slipping of the instrument from the groove of the staff, and the wounding the bladder or rectum. The anecdote recorded of old Mr. Dease, of Ireland, a dexterous lithotomist is a happy illustration of the above statement, and shows the amount of practice which this surgeon considered necessary to perfection in the consecutive manipulations in lithotomy. In the terminal steps of the lateral operation, Mr. Dease was in the habit of forwarding the staff and scalpel in a very dexterous manner into the bladder by a simultaneous movement of either hand. He was attached to this method, and was in the habit of constantly performing the motion his hands would take in this manœuvre; even at the dinner-table, while speaking to some one, he might be often detected moving his knife and fork as if pushing the scalpel and staff on together, without thinking of what he was doing.[*]

The comparatively greater safety, simplicity, and facility of the operation recommended by Mr. Allarton[†] appear to me to constitute its peculiar merits. On the six occasions on which it has been performed at the London Hospital, either by my colleagues, Messrs. Critchet and Gowlland, or by myself, the steps recommended by Mr. Allarton have been followed with but a slight variation. The staff having been introduced into the *uninjected* bladder, the prostate was made out by the left index finger passed into the rectum, and its apex was steadied by it against the staff. A scalpel, with the blade half an inch longer than the length of the finger in the rectum, and having a straight cutting edge and curved back, was introduced with the cutting edge upwards into the perineal raphé, about half an inch in front of the anus, and passed steadily downwards and backwards until its point impinged in the groove of the staff, cutting through the lower wall of the back part of the membranous portion of the urethra, just in front of the point of the index finger.

The knife was then carried forward about the eighth of an inch along the groove of the staff, and was then withdrawn by sweeping it upwards and forwards (as regards the operator), so as to make a median cutaneous incision about an inch in length. A common bone probe, set in a rough handle, was next passed along the groove of the staff into the bladder. The staff was then removed, and the left index finger, well greased, being passed along the *upper* surface of the probe to the prostatic urethra, arrived through this, after several graduated rotations, into the vesical cavity. The forceps were next introduced along the upper surface of the finger, and the calculi removed.

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[*] Colles' Lectures on Surgery, p. 85.

[†] Lithotomy Simplified.

Thus it will be seen that the only points in which this lithotomy differed from Mr. Allarton's directions were—the use of the form of scalpel alluded to, and the incision of the membranous urethra by drawing the knife forwards and upwards, instead of passing it towards the prostate in the contrary direction. The cases were all successful, and the patients rapidly recovered.

Independently of the many recommendatory points in this method of urethral lithotomy insisted on by Mr. Allarton, *the necessity of injecting the bladder*, before cutting *does not exist*, inasmuch as the cavity of the viscus is not cut *into;* and the bladder is not in danger of being wounded, as the incision nearest to it is carried away from it towards the operator. But there is an important reason why *the bladder should not be injected*, and it is this:—The prostate gland is taken to be, so to speak, the land-mark of the operation. This organ in children is very small, and it requires a little education of the finger in order readily to detect it. If the bladder is tense in consequence of retained urine or injected fluid, the walls encroach on the immediate area of the gland, and the prostate is then not easy to be felt. On the contrary, when that viscus is not distended, the prostate stands out in comparatively prominent relief, and can easily be felt by the finger, and steadied against the staff.

I have little doubt that Allarton's operation will, in course of time, be generally adopted for the removal of small or averaged-volumed calculi from the bladder, and I cannot but think that since its introduction it would have received ere this a greater amount of sound surgical sanction had some lithotomists of the day, of the highest authority, deviated, in a spirit of inquiry, from a beaten track; and experimentally tested the applicability and efficiency of this modified Marian operation, the revival of which must be regarded as a useful addition to the resources of the healing art, and as a high compliment on the part of modern to ancient surgery.

Broad-street-buildings, 1860.

ACUTE NEURALGIA CURED WITH THE AID OF THE CONTINUOUS GALVANIC CURRENT,

WITH PECULIAR SYMPATHETIC EFFECT UPON THE UTERUS.

By Harry Lobb, M.R.C.S., &c.

The following case will be interesting, not only to those who look upon galvanism as a valuable therapeutic agent, but to the physiologist, who may perceive a peculiar sympathetic or searching action of the galvanic current, whereby the real organ in fault is sought out by the fluid, and the reflex action of the nerves demonstrated.

I was sent for on the 29th ultimo to see a lady suffering from the most acute neuralgia of the nerves of the upper and lower jaws and temple of the right side. She could obtain no relief from the remedies she had tried. The week previously she had been attacked with neuralgic pains in the right knee; but this had departed since the appearance of the pain in the jaws. Her age was about forty-six, and she had not menstruated for seven months; otherwise she was in tolerable health. Her teeth had been examined by a dentist and pronounced sound.

I applied the continuous galvanic current to the jaws and temple with the aid of a Pulvermacher battery—the positive pole beneath the ear, the negative to the various painful parts,—for half an hour. I left the battery, explaining its use, and desired it to be applied the moment there was any return of pain. This did not occur till the evening, when it was applied and the lady had a good night, awaking free from pain. She passed the day well, but about one A.M. on Tuesday (the 1st instant)she had the most acute agony in the upper jaw it was possible to conceive, when the current was applied, and she fell asleep in the midst of it. She awoke in the morning free from pain, menstruation having come on during the night; this has progressed favorably, and she had no return of the neuralgia.

This might be considered by some to be an accidental coincidence, and not induced by the galvanism; and this plea I should allow if I had not already had several allied cases where the same effect had been produced in the same manner, and quite as unexpectedly; for I did not learn the condition of this lady until afterwards.

I have frequently observed that galvanism has this peculiar power of selection: that although, through pain or some other cause, the current may be applied to a part or organ, some distant and hitherto unsuspected organ is stimulated by it, and pain is removed, at the same time secretion is induced in a complementary gland.

Brook street, June, 1860.

OBSERVATIONS ON SOME RARE SURGICAL ACCIDENTS.

By Weeden Cooke, Esq., M.R.C S.,

Surgeon to the Royal Free Hospital and to the Cancer Hospital.

The labors of our forefathers have been so fruitful, and the laws resulting therefrom so indisputable, that it would be difficult to point to any one bone in the body which, when the subject of either dislocation or fracture, has not been fully studied, the symptoms of its displacement or injury accurately described, and the method of reduction or adaptation clearly and authoritatively defined. The young dresser, when first called upon to diagnose these injuries in the absence of his more practised superior, or the middle-aged practitioner whose surgical acumen has rusted from disuse in a remote district, can always refer to those classic guides which adorn the literature of this century, with assured confidence that he will find therein described the injury he has before him, and the mode of manipulating for its relief. But, whilst asserting with pride the remarkable and scientific accuracy of this branch of surgery, it must be acknowledged that there are occasionally embarrassing cases, which from the rarity of their occurrence, have not been seen by the student during his hospital studies, and do not find a place in the class-books. Of this nature is a case of

Fracture of the Pelvis,

which has recently been discharged from under my care in the Royal Free Hospital. I will first relate the particulars of the case, and then remark upon its diagnostic peculiarities :—

Wm. G——, aged thirty, admitted under my care Jan. 10th, 1860. Whilst carrying a sack of corn he fell with the whole weight of the sack and its contents upon his loins. He was unable to walk, and was carried into the hospital. Upon admission, the symptoms were very obscure as to the exact nature of the injury. There was great fixedness of the whole of the left leg, the foot was everted, the limb shortened, and the gluteal region much flattened. There was excessive pain and tenderness in the course of the long saphena nerve, especially at the inner condyle, resembling morbus coxæ. There was also retention of urine, requiring the use of the catheter for two days. By extension and counter-extension the shortening and eversion were overcome, and the limb readily returned to its natural position. He continued to complain of much pain down the inner side of the leg, and especially over the tuberosity of the ischium. Forcible pressure upon this latter point produced great pain, and a certain amount of mobility was manifested. There was no crepitus, however, to be detected over any part of the pelvis. Abduction and adduction of the thigh were equally painful, and flexion upon the trunk, which was employed for diagnostic purposes, induced very acute suffering. The long splint was applied without the extending perineal band, and the patient kept quietly in bed for six weeks. The splint being removed, he was then allowed to get out of bed and sit up for a short time each day, but suffered much. He was not able to use the crutches for another month, and the leg swelled when put to the ground. There was still some tenderness over the ischium. At the expiration of three months he could with the aid of crutches get about tolerably well, but was not able to stand entirely upon the leg of the injured side. He was then sent to the Convalescent Hospital at Walton, and is doing well.

Now there were three views to be taken in the diagnosis of this case when first admitted. Was it merely a severe contusion accompanied with concussion of the nerves supplying the muscles of the thigh? was it a dislocation? or was there fracture either of the head of the thigh-bone or of some portion of the pelvis? and if the latter, what portion? It is not at all an uncommon circumstance for patients to be brought into hospital unable to use one leg, and shrieking with agony upon the least motion, in whom there is neither dislocation nor fracture, but such loss of power from nervous concussion that they will lie in bed for weeks, unable to walk, or even to stand upon the injured limb. The absence of all crepitus or displacement is generally sufficient to indicate the nature of these injuries; but even then a lurking doubt will sometimes remain in the surgeon's mind whether there is not some pelvic injury. In the case before us, however, the displacement when first admitted was sufficient to prove that it was something more than contusion. Of all the dislocations to which the thigh-bone is liable, that of the head of the bone on the pubes, commonly called "upwards and forwards," is the only one in which the leg is decidedly everted; but as the head of the bone can in that case be felt below Poupart's ligament, and the leg cannot be flexed upon the trunk, this was of course not the injury presented for diagnosis. It was then a fracture —possibly of the neck of the os femoris. But who ever met with a case of fracture of the cervix femoris within the capsule in a man aged thirty? Of 225 cases seen by Sir Astley Cooper, two only occurred in persons under fifty. There is, however, a fracture external to the capsule which in most respects resembles the injury our patient had sustained. In this case the leg is slightly shortened, the foot is everted, and the usual rotundity of the joint is lost. This fracture may happen from severe injury at any age, and even the crepitus, from the neck of the bone being driven into the cancellated structure of the trochanter, may or may not be very evident. The great diagnostic mark distinguishing the case before us from the fracture above alluded to is this: that in the pelvic fracture the leg, after reduction, retained the position it was placed in unsupported; whilst in all cases of fracture of the upper part of the thigh-bone the abductor muscles will, when uncontrolled, draw the foot outwards, and also restore the shortening.

Having, then, by a process of elimination, arrived at the conclusion that the fracture was in some part of the pelvis, it behoves us now to fix upon the amount of injury done. The ossa ilii were certainly uninjured; there was neither crepitus nor pain produced by manipulating this portion of the pelvis. The os pubis of the affected side was also undoubtedly free from injury. That the ischium was decidedly fractured was proved, I think, beyond contradiction by the extreme pain produced when it was pressed upon, as well as from the oscillation which could be effected in it. I am further disposed to argue that this bone was by the injury partly separated from its colleagues at the acetabulum, and thus, the round ligament being injured, the head of the femur was allowed to be drawn somewhat upwards and outwards by the strong pelvic muscles which have this office. The inability to pass urine, also, for two days will be explained by loss of purchase for the accelerator urinæ and compressor urethræ muscles, which take their origin from the ramus of the ischium. In the greater number of instances of fracture of the pelvis the diagnosis may be verified in the mortuary. All fractures of the pelvis are dangerous, from the possible injury to its important contents; I am, therefore, fortunate in having been able to verify my case by induction only, and at the same time to have the prospect of seeing my patient again actively employed in the business of life. Subsequently to the removal of the splint much friction was employed with great attendant benefit, and tonics were necessary, owing to a naturally weak constitution.

Upper Berkeley-street.

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ON
THE TREATMENT OF ANEURISM FROM ANASTOMOSIS BY EXCISION.

By Oliver Pemberton, Esq.,
Surgeon to the General Hospital, and Lecturer on Surgical Pathology at Sydenham College, Birmingham.

The description which John Bell gave, in 1796, of the aneurismal tumour, which he ventured to call "Aneurism from the dilatation of anastomosing vessels," has never been surpassed in accuracy: the varicose tumour of Petit, the erectile tumour of Dupuytren, the telangiectasy of C. F. Graef, and even the arterio-capillary tumour of Gerdy (Chirurgie Pratique, t. ii. p. 493). fail to convey a more correct notion of the features of this remarkable disease. To our knowledge, then, of the anatomical characters or the pathological condition of the parts entering into the structure of these tumours there can be little added that would not be found already recorded in the luminous pages of Bell, or in the writings of those other authorities to whom I have referred. It is otherwise, however, with the question of treatment.

For the most part the means of treatment selected in the hope of curing "aneurism by anastomosis" resolve themselves into three well-marked divisions. These are—

1. Endeavors to alter the intimate structure of the tumours, so as to render the further development of the arterial network well nigh impossible, and at the same time to promote its destruction and absorption.
2. The deligation of the principal arterial branches that are distributed within the tumour itself, or of those main trunks that immediately give off the branches that nourish it and pass about its locality.
3. The excision of the disease.

The first division comprehends pressure, the use of refrigerants, of caustic pastes, the injection of astringent fluids, and the introduction of setons and of needles with the view of exciting suppuration. Without, here, more particularly inquiring as to the value of compression, refrigerants, caustics, and the injection of astringent fluids, it may be affirmed that each one of these methods will prove of great utility in certain cases; these will, however, be found to be characterized generally by their comparative insignificance in size, and by their situation on the more solid textures of the frame. They appear to me altogether inadmissible in a case like that which I am about to relate, as their exhibition could only delay the attainment of the end in view. On the other hand, the introduction of setons, of numerous single threads, of needles, and ligatures, with the view of exciting suppuration, or other means of treatment having similar objects to attain—all these will be eminently useful, even should they fall short of effecting a complete cure of the disease. The excitement of suppuration in all parts of one of these vascular growths cannot fail in changing completely the nature of its structure; so that should absorption of the now altered tissue be, from its size, a matter of improbability, at least one great danger—that of hæmorrhage—is absent, and other steps to insure its removal can now be adopted in safety.

Of all the methods of treatment devised for the relief of this formidable disease, perhaps none have resulted in so great disappointment as that in which the ligature of either the main arterial trunks or their branches supplying the tumour, has been accomplished. The return of blood into the disease in many instances occurred as certainly as the flow through the main channel was cut off, and where the only branch yielding a supply was apparently arrested, a new one, ere long, was found to have arisen near the same place. An exception, however, to this result, as will be seen, must be made in favor of those tumours situated in or near the orbit.

Of forty-five cases in which the ligature was applied, either on the branches or the principal trunk, the following results were obtained:*—

In ten of these cases the branches were ligatured. Of the patients who were submitted to this treatment not one was cured!

In thirty-five the principal trunk was tied. Of this number, fourteen were cured, ten died, nine were unsuccessful, and in two the result was imperfectly given. Further, in reference to situation, of these thirty-five, six cases were tumours in the orbit; of these, five were cured, and the sixth was reported as being imperfectly so.

It would appear, then, from these observations, that the ligature on the branches has altogether failed, and that where the principal trunks were tied, success was only remarkable when the tumours were within the orbit.

With such evidence of the danger and uncertainty attending this practice in the treatment of these diseases, under what circumstances, let us inquire, are we justified in resorting to it? In the first place, the tumour must be sufficiently formidable as to endanger the life of the patient, should its further increase be unarrested. Secondly, to check hæmorrhage. Lastly, with the view of preparing the tumour to undergo, in comparative safety, that most certain of all remedies, (where its situation renders it practicable,) the excision of all the parts entering into its formation.

The excision of the structures constituting aneurism by anastomosis, seems to have impressed, in a very strong degree, the minds of those surgeons who first directed their attention to its relief. "You must not cut into it, but cut it out." This was the opinion held by John Bell, and he vigorously and successfully illustrated its value. J. L. Petit held the same doctrine, expressing it in the important caution that the incisions should be made in the sound tissues, where the bloodvessels were unaffected.*

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* Nélaton, Elémens de Pathologie Chirurgicale, tom i., p. 546.

George Freer, who published his "Observations on Aneurism" in 1807, and who added a lustre to his connexion with the General Hospital in this town that has never been surpassed, by being the first to successfully tie the external iliac artery for the cure of femoral aneurism, also was impresssed with the importance of the total removal of these growths by the knife. He records two cases, in which the disease was situated in the cheek, wherein the treatment by excision was attended by complete success. (p. 34.)

More recently, surgeons have been content to regard the operation by extirpation as the means of treatment that should be adopted when all others have failed. There are no records of late years, that I am aware of, of cases where this mode has been resorted to in the first instance; and yet there are many instances where such a course would have induced far less suffering, and would have placed even life itself in smaller peril. Thus Nélaton (*op. cit.*) relates, that M. Mussey, for the relief of a fungus of the head, tied both common carotids, but was after all obliged to have recourse to excision, and cured his patient.

Dr. Warren's case also (*American Journal of Medical Science* 1846) may be perused with advantage, as it shows that however necessary preliminary treatment may be ere excision can be ventured on in safety, yet it must come to it at last. The tumour, in this instance, was situated on the forehead, and was three inches in diameter: after repeated applications of needles and compressing ligatures to the arteries in the neighborhood of the disease, together with the use of caustics, the cure had to be completed by excision.

This excision, or complete extirpation of the diseased structure, need not of necessity be carried out by the knife. Sir Benjamin (then Mr.) Brodie effectually accomplished it in the case of a tumour similarly situated, and which had resisted all previous efforts at cure, by means of ligatures so applied around steel needles, that complete strangulation was produced at its base. ("Medico-Chirurgical Transacrions," vol. xv., p. 177.) The situation, however, of the disease, must be the main guide to the selection of the mode by which it shall be thus entirely removed.†

The following case will illustrate most of the points that have been referred to in the preceding observations:—

A. W.——, aged fifteen, a tall, spare, sallow-complexioned girl, was placed under my care in the General Hospital, Birmingham, on the 19th of November, 1858, by Mr. William Higgins, surgeon, of Abbots-Bromley, in Staffordshire, for the relief of a vascular enlargement of the upper lip.

History.—Her parents are living, and healthy. She has had twelve brothers and sisters, of whom six are living. No member of her family, to her knowledge, has any mark or deformity, or any affection similar to her own. She has been always somewhat delicate in health, but has not had a serious illness. Menstruation commenced a year since, and has continued regular to the present time. The growth first made its appearance when she was three years old, in the form of a small red spot on the left half of the upper lip, and has gradually increased to its present dimensions. Both lobes of the thyroid gland are considerably enlarged.

Present condition.—The left half of the upper lip is entirely occupied by a large pulsating, compressible mass, of a dusky red color. The disease extends upwards as high as the malar bone; outwards, to within a short distance of where the facial artery crosses the lower jaw; inwards, for half an inch beyond the mesial groove; and downwards over the mouth, closing completely the view of its orifice, and concealing the lower lip. It implicates within these limits the entire thickness of the lip and cheek. At the free margin of the growth, where it is most depending, ulceration has taken place through the red line of the lip, a thick brown scab marking the arrest of recent bleeding. The dusky-red color fades away very gradually in the white of the cheek and lip, its disappearance being shown by numerous veins displaying themselves for the first time, coursing downwards on all sides towards the tumour. There is visible pulsation. Grasped by the hand, its bulk somewhat diminishes and a strong throbbing sensation is experienced as if conveyed throughout the entire swelling; whilst, in places vehement pulsation, synchronous with the wrist pulse, is observed. The bridge of the nose, for rather more than an inch, is occupied by a similar structure, presenting the same dusky-red appearance, and of a similar pulsating character. Compression of the facial arteries does not appear to perceptibly diminish either the bulk or the pulsation of the tumour. These vessels are large, tortuous, and unnaturally prominent; they roll under the finger like pieces of whipcord, but the left one is much larger than the right.

The tumour has always been more or less painful, but to a greater degree since menstruation, the recurrence of a period being marked by increased energy in the pain experienced, as well as by its turgidity and livid discoloration. About three months ago it bled for the first time. The blood was of a bright arterial color. She was then menstruating, and the bleedings have been especially repeated at each monthly period since. The annexed woodcut accurately represents her appearance at this time:—

A sharp attack of arterial hæmorrhage having taken place a few weeks after her admission, on the

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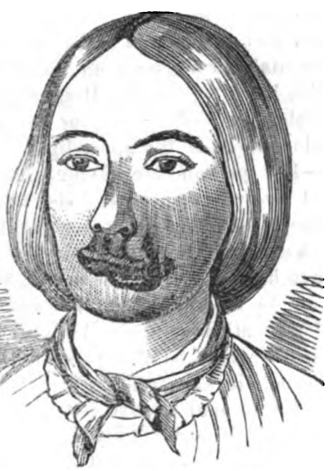
* "J'ai traité, dit Petit, plusieurs de ces tumeurs, que j'ai emportées sans avoir la moindre hémorragie; mais je coupais les vaisseaux dans le lieu où ils n'avaient que leur diamétre natural."

† See Mr. Hodgson's case, "Medico-Chirurgical Transactions, vol ix., p. 216.



15th of December, under chloroform, I proceeded to place a ligature on the left facial artery as it crosses the lower jaw. On exposing the artery, it was seen to be as large as a goose-quill, varicose, with its walls thinned in the extremest degree. It was so closely adherent to the vein, similarly enlarged, that in separating it the vessel gave way, and bled furiously. I therefore at once tied both vessels, placing a ligature above and below the rent, so as to effectually control the hæmorrhage. After this was accomplished, the pulsation appeared to me diminished, but not materially so. The ligatures separated without bleeding on the twelfth day. The tumour was not altered in size, but the vehemence of the pulsation was considerably lessened.

Jan. 17th, 1859.—A portion of the under and inner part of the lip, measuring two inches in diameter, was included in a noose, after the method of that described by Mr. Fergusson, (*Edinburgh Monthly Journal of Medical Science*, 1847.) Free suppuration in the part strangled followed this proceeding, and once or twice active arterial hæmorrhage. The application of cold, however, and repeated dressings with the tincture of the sesquichloride of iron sufficed to restrain it.

Three weeks after this I passed a needle underneath the superior coronary artery on either side, as it ran, enlarged and tortuous, to the disease. All pulsation ceased in the intermediate portion of the lip on the tightening of the strings cast around the needles. At the end of a week these were withdrawn.

March 16th.—Pulsation has ceased altogether in the lip, mainly between the situation of the ligatures on the coronary vessels. It yet remains in the cheek and at the root of the nose. The tumour generally is harder to the feel, but unaffected as to size. Two needles were passed beneath the vascular parts on the bridge of the nose on either side close to the cheek, and ligatures firmly cast around them. These were removed on the 23rd, when the pulsation was found to be diminished, but not destroyed.

May 11th.—Three threads, doubled, were passed from above downwards, starting at regular intervals, from within outwards, on a level with the malar bone, and traversing the swelling in the following manner:—The needle was entered at its upper limit, and a single thread was passed subcutaneously so as to come out where the skin joined the red margin of the lip, and there left free. The upper end of the thread, left sufficiently long for this purpose, was next carried through the same aperture from which the first one started; but it was made to penetrate deeper, so as to run close above the mucous membrane of the mouth, having its point of exit opposite to the thread already placed, the thickness of the lip and of the disease intervening between the two strings. This process having been repeated in two other portions of the tumour in a precisely similar manner, the six threads were next tied firmly, the effect being that the mass shrank and contracted upwards to such an extent that the lower lip became visible.

31st.—These threads were removed. Their presence has excited general suppuration, and the tumour, though not smaller in size, is much harder and more circumscribed in its character.

June 15th.—Two portions, of the size of a half-crown each, situated in the front view of the mass, were transfixed by needles crossing each other; threads were passed around these, and the tissues strangled between them.

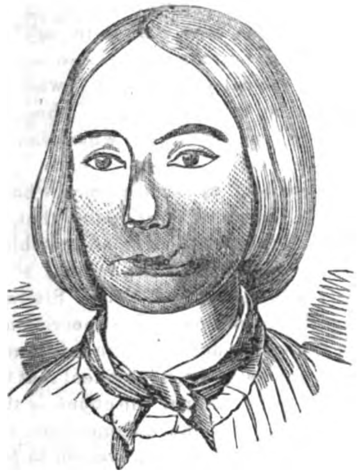
21st—These needles were withdrawn, having excited further suppuration in the disease. There is now only very slight pulsation to be detected in the cheek, whilst it has altogether disappeared from the lip.

From this date, the parts inflamed and irritated by the repeated introduction of threads and needles were permitted to subside. All tendency to hæmorrhage ceased, the wounds healed, and the lip and cheek settled down in a permanent, solid tumour, scarred and disfigured by the treatment necessary to destroy its vascular character.

I could now only contemplate the excision of this, as promising to relieve my patient permanently and effectually of so dreadful a malady. In this view I was strengthened by the opinion of Professor Syme, who, visiting the hospital with me in August, and carefully examining the condition of the disease, recommended this mode of treatment as the one alone calculated to afford her relief.

With the view of recruiting her health, somewhat impaired after nine months' confinement within the hospital, I advised her going home for a time. Accordingly, she left on Sept. 2nd, and was readmitted on Sept 27th, looking well and strong. At this time, on examination, only a very faint pulsation in the upper part of the disease could be detected. There was no thrill, and no ulceration. The deformity, however, was even more striking than at first.

Oct. 5th.—Under chloroform I proceeded to extirpate the growth in the following manner:—A double-edged knife was passed at once through the cheek into the cavity of the mouth, at a point to the outside, and rather behind, the malar bone, all the tissues being then rapidly severed downwards to the angle of the mouth. From the commencement of this first cut a second was made to run obliquely across the cheek, close to the left ala of the nose, so as to extend beyond the mesial groove of the lip, thus including between the two incisions the entire disease, in a V-shaped flap. The hæmorrhage for a few moments was alarming. Ligatures were rapidly applied, which sufficed to control its more prominent sources, but it continued abundantly, until the parts were drawn closely together by hair-lip needles. After five of these had been inserted so as to have a good wide sweep from the cut edges, and the threads drawn around them, the bleeding ceased. Owing, however, to the great thickness of the cheek, the wound came together with some difficulty, and there was in places a good deal of irregularity and tension about the needles. The patient was faint from loss of blood, and required an abundant supply of stimulants ere it was prudent to remove her to bed. On examining the excised part, scarcely any traces of the original structure were to be detected. The materials of which it was composed appeared of firm unyielding texture, with numerous fibrous bands intersecting. The delicate cellular and vascular tissues had evidently entirely disappeared in the repeated suppurative processes to which they had been subjected. The broader portion measured upwards of three inches in length, whilst it was nearly two in thickness.



Oct. 9th.—Three needles were removed yesterday, to-day the remaining two. The parts are much swollen, but there is no gaping of the edges. After this, her progress was most favorable; the wound healed rapidly, and as the scars of the needles diminished in their prominence, it was wonderful to remark how little the cheek seemed to have lost, notwithstanding the great gap that had been made in its substance by the operation. Towards the lip and left angle of the mouth there was even yet too much material left, and could more have been taken away, having a due regard to the subsequent union of the parts, I felt that her appearance might have been still more improved. Notwithstanding this impression of my own, she seemed well pleased at her appearance, and expressed herself as contented to abide by the result, which is accurately portrayed in the second woodcut, taken just before her discharge from the hospital on December 9th, 1859.

The foregoing narrative warrants the conclusion that the ultimate treatment of aneurism by anastomosis must be by the complete excision of the parts which happen to be involved in the disease. It matters not what amount of time may be occupied in the preliminary treatment; this, by whatever means accomplished, will have reference to but one object—the diminution of the vascularity of the growth, so as to render extirpation as early as possible practicable.

Whilst, then, it is admitted that there will always be cases in which the surgeon will wisely resort to general means of treatment to alter the structure of the growth ere the knife is made use of, (in which category I would place the case of A. W——,) yet there may be others where in the first instance a contrary method may be desirable, and the deformity be removed without any delay.

In the selection of the early mode of treatment, much will depend on the circumscribed or diffused character of the disease. Where the latter feature prevails, the diminution of the vascularity should be sought by all possible means; whilst in the former, we may safely cut it out at once. The following circumstance will add value to this opinion:—

Within a few days of Professor Syme's examination of this patient with me, a case precisely similar was sent to him, for his opinion, by a surgeon at Carlisle; it was, however, in the pulsating stage. Mr. Syme advised its complete removal without delay; and as the patient desired him to perform the operation it was at once done. In describing the proceeding to me in a letter ten days subsequently, he says: "There was not more than the ordinary bleeding from the same extent of excision, but the gap was fearful. It extended from beyond the angle of the mouth to the other side of the nose, and nearly up to the eye. Nevertheless, by cutting laterally through the cheek, I obtained sufficient freedom to bring the edges together. They have united perfectly, and I really do not think you could tell that any freedom of consequence had been taken with the face."

It will be noticed that the bleeding in this case was not more than ordinary. The disease was, I have no doubt, accurately defined, and admitted of the vessels being secured in that situation where they were of only common magnitude. On the other hand, after nine months of treatment of various kinds, I could only describe the hæmorrhage as of a most formidable character in the case I have adduced; and I can now only attribute this to the eminently diffused nature of the tumour, its structure shading off almost imperceptibly into surrounding parts.

We are justified, then, in arriving at the following conclusions which may regulate our surgical treatment of these cases:—

a. To cut out the parts containing the vascular structure as speedily as possible.

When the lips are the seat of disease, this proceeding may, in some instances, be adopted, to the exclusion of all other modes.

b. If this excision cannot with safety be accomplished in the first instance, when the disease is otherwise situated, owing to the dangers of hæmorrhage, or the prospect of too great disfigurement, the branches of arteries leading into the growth should be tied subcutaneously by needles and ligatures, whilst the intimate structure of the disease may be further altered by the introduction of numerous double threads, in the way I have described.

Should the situation be altogether unfavorable for the use of the knife, Sir Benjamin Brodie's plan of strangulation at the base should be adopted.

By whatever mode, however, the vascular character of the growth is modified, let this change only be desired in the hope that one or other of the means of extirpation I have mentioned may be carried out.

Temple-row, Birmingham, 1860.

ON THE

INFLUENCE OF TROPICAL CLIMATES

ON THE

RISE, PROGRESS, AND TREATMTNT OF UTERINE INFLAMMATION.

By Edward John Tilt, M.D., M.R.C.P.L.,

CONSULTING PHYSICIAN TO THE FARRINGDON GENERAL DISPENSARY AND LYING-IN CHARITY.

(Concluded from July No. page 26.)

The etiology of urine inflammation in tropical climates, its rapid progress and unusually severe symptoms, have been considered in previous communications: but a still more important question must be briefly answered.

3rdly. *What modifications are required in the treatment of uterine inflammation in tropical climates and in tropical invalids.*

Considered in this point of view, the treatment of uterine inflammation divides itself into the treatment to be adopted during a residence in tropical climates. and that required after returning to a temperate region.

1. *Treatment of uterine disease in tropical climates.*

It is obvious, from what has been previously stated, that, on arriving in India or any other tropical region. young women should keep quiet, and learn to so adapt themselves to the climate as to obviate its inconveniences and ward off its dangers before their constitution be subjected to any fresh trial of strength. It would be wise to seek to re-establish the regularity of the menstrual flow, and not to allow marriage to take place until this be accomplished. European habits of activity should be kept up so far as experience teaches them to be consistent with health; riding and driving at dawn and sunset are evidently indicated; for it is for those who practise in hot climates to decide how far exercise under solar influence is or is not prejudicial to European women. It is evident that, so far as the male sex is concerned. this is not followed by the evil results which might have been anticipated. It has been remarked by the well known writer on military medicine, Dr. Robert Jackson, that in the East and West Indies, European troops were never so healthy as when actively engaged under solar influence, and never so sickly as when reposing in barracks. The healthiness of the European troops engaged in the late siege of Delhi, under tremendous heat, was a matter of wonder. For myself, I never felt stronger than during the ten days spent in crossing the desert from Gaza to Cairo, in saddle all day, at the end of May, the thermometer ranging from 100° to 120° Fahr.

The strengthening influence of the cold bath and cold shower bath is well known; but even when European women are not suffering from uterine inflammation, it would be well if, during a residence in tropical regions, they were to impart to the womb a portion of that bracing influence so largely given to the skin, by the daily use of cold water injections, administered by means of one of those vulcanized india-rubber syphon syringes which can be so easily and safely employed.

I have been told by medical men who have practised in the East and West Indies that, even when not inflamed, the womb is in an irritable condition, and that the uterine and the vaginal secretions are unusually abundant; and Dr. D. Stewart even admits a morbid condition in these secretions, which so react on the womb as to bring on inflammation. Under these circumstances, it is evident that the habitual use of cold water vaginal injections is the best preservative against uterine inflammation, and the best means of enabling European women to prolong their residence in a hot climate. A change to the hills or a sea voyage are good modes of preventing uterine inflammation when it is brought on by failure of constitutional strength.

With regard to the treatment of uterine inflammation as it occurs in India, Dr. D. Stewart, Dr. Scott, and many other practitioners fully adopt the principles of treatment laid down in Dr. H. Bennet's writings and in my own. They do not believe that the womb escapes from the general rules of pathology, and maintain that its diseases require local or surgical measures as well as constitutional. Indeed, they consider constitutional remedies like quinine and steel as less useful in India than in England, and rather build their hopes of recovery upon the application of the nitrate of silver or stronger caustics to the inflamed or ulcerated surface of the womb, alike in the native women and in the female European residents. In the latter, however, it frequently happens that the constitution is so undermined by the enervating influences of climate, that, notwithstanding the best treatment, the ulcerated womb will not heal, or reopens soon after healing, so as to render imperative a return to a more bracing climate.

2. *Treatment of uterine inflammation in those who return from a tropical country.*

When patients of either sex return from India for some serious operation, they are very judiciously advised by the old Indian practitioners, who reflect so much honor on British medicine, not to have the operation performed until the blood has been renovated, and the constitution braced up by a year's residence at home; but I think it would be very injudicious to extend this injunction to the healing of uterine ulceration by surgical treatment. The constitution is much more liable to suffer from the continuance of an irritable sore than by the application of the lunar or even a more energetic caustic.

With regard to the principles of treatment which I consider best in the various forms of uterine inflammation, it would be out of place to discuss them in the present communication. My views and those of my friend, Dr. H. Bennet, have been long given to the profession; but those who adopt them must expect to find the treatment of uterine disease in tropical patients baffled by complications, so as to protract the cases much beyond the usual period of their duration.

This inability to recover health, notwithstanding the best treatment, constitutional as well as surgical, is in the anæmic to be referred to the deteriorated condition of the blood and to a thorough exhaustion of nerve force, and recovery will reward perseverance with a well-adapted succession of tonics. Traveling, a residence at the sea-side, sea-bathing, and hydropathic appliances will often render great service in such cases. In others, the favorable progress which had at first followed a well-directed plan of treatment will be suddenly checked, without any assignable reason, until successive biliary accumulations and outpourings indicate chronic disease of the liver, which requires to be treated by mercurials, alkalines, tonics, and judicious regimen, or the uterine disease will not progress favorably. In a patient now under treatment, a large quantity of bile is vomited or passes from the bowels once or twice a month, often without known cause, sometimes from worry and fretfulness, and this has been the case for several years.[*]

Sometimes the check to the favorable progress of uterine inflammation will be explained by the patient getting wet through, or suffering some severe mental shock, which brings back a return of ague or of remittent fever; and the uterine disease will not yield until these complications are cut short by quinine. In such cases, when the local complaint is grafted on thoroughly broken-down constitutions, it would be injudicious to follow up the surgical treatment of the uterine inflammation until the complete removal of all uterine lesions. Whilst these are kept in abeyance by medicated injections, one should seek to improve the system by change of climate, mineral waters, and hydropathic appliances, with the view of inducing those constitutional changes which may cure the various elements of the case, should such changes not arise spontaneously in the course of time—the chief remover of chronic disease. At repeated intervals, varying from three to six months, it would be well to test the progress made towards the restoration of the constitutional powers by the effects of local treatment on the persistent uterine disease, continuing the treatment during three weeks.

During the last ten years I have known young women sent out to India in whom menstruation was so irregular as to afford little chance of the maintenance of health; I have attended patients who have been almost crippled for life by remaining in India long after the development of uterine inflammation; others I have seen who had come back to England on account of uterine inflammation, returning to India before the disease was quite cured, and speedly obliged again to abandon their Eastern homes by a relapse of the old complaint; and I have therefore been led to insist on the following practical rules:—

1. When menstruation has been habitually morbid in a temperate zone, women should not form permanent settlements in the tropics.

2. Those who have frequently suffered from uterine inflammation in a temperate region should not take up their abode in tropical countries.

3. When the European residents of tropical countries suffer severely from uterine disease, they should remove to a temperate climate.

4 Those who come back to Great Britain from tropical regions invalided by uterine disease should not return to their Eastern homes until some months after the cure of the uterine disease.

I feel convinced that a close adherence to these rules would prevent a large amount of disease, save a useless expenditure of money, and check the social misery which often follows the loosening of family ties by long continued absences.

Grosvenor-street, Grosvenor-square, 1860.

ON A

CASE OF FRACTURE OF THE SUPERIOR MAXILLA AND ITS TREATMENT.

By James Salter, M.B., F.L.S.,
Surgeon-Dentist to Guy's Hospital.

I have thought that the profession might be interested in the particulars of a case of fracture of the superior maxilla, in which I adopted an unusual and, as far as I know, a new mode of treatment.

My patient was a young gentleman, the son of a clergyman in Berkshire. On Saturday, April 17th, 1859, while playing cricket, he was rushing with great impetuosity to catch a ball, when one of his companions, not perceiving him, ran forwards with a similar object, and they came into violent collision, my patient receiving a blow from his fellow-cricketer's forehead on the upper jaw, immediately below the right malar bone. A distinguished general practitioner in the neighborhood was at once consulted, and he found, upon examination, that a fracture of the maxilla had occurred, driving inwards the two right upper pre-molar teeth and first molar, with their containing alveoli.

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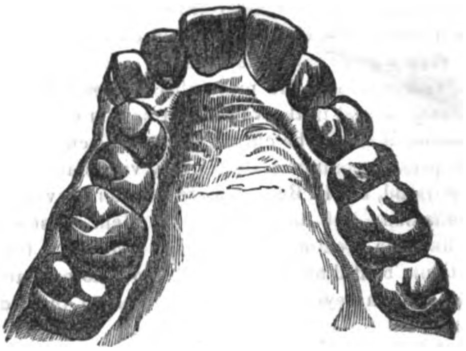
[*] Dr. Copland ascribes the prevalence of liver diseases amongst the European residents in tropical countries to the liver being larger and its secretions more copious in the European than in the Negro and in the Mongol races: but my friend, Mr. Robert Clarke, who has been colonial surgeon at Sierre Leone and at the Gold Coast for twenty-two years, and who had abundant opportunities of testing the value of this assertion in hospital practice, assures me that he has not observed any difference in the size of the liver in the Negro and in the European.

On the 19th of April, his professional attendant brought his patient to me for consultation, as some difficulties had occurred in the treatment of the case. The condition of the patient when I saw him was as follows:—A fracture of the jaw had occurred immediately behind the canine tooth, apparently passing vertically up to about the summit of the fangs of the pre-molars, and then extending at right angles horizontally backwards nearly, if not quite, to the posterior extremity of the bone. The anterior portion of the fractured bone was driven inwards upon the roof of the mouth to the extent of about the third of an inch; while the second molar tooth, implanted in the posterior portion, remained unmoved, the broken bone being as it were, a radius, of which the second molar tooth was the fixed axis. The projection of bone into the roof of the mouth led to a corresponding depression on the outer side of the jaw, and this was somewhat apparent also on the face. Very little swelling had occurred, nor was much pain felt, except on manipulation. There was, however, considerable inconvenience experienced from the fact that the displaced teeth no longer opposed their fellows in the lower jaw by a normal "bite;" the cusps of the teeth, instead of interlocking with their inferior opponents, met them more or less on the points, and the mouth could not be satisfactorily closed.

On endeavoring to force the displaced bone into its proper situation, considerable pain was produced; it could not be got thoroughly into position, and when the pressure was removed the bone almost immediately resumed its former direction projecting inwards. During this manipulation distinct crepitus could be felt.

To meet what appeared to me the requirements of this case, I adopted the following plan of treatment:—I prepared a gold plate to fit the interior of the mouth, so as to hold the displaced portion of bone as much as possible in position, thus far acting in every sense as a splint, but with the additional advantage that it was capable of repeated alterations from time to time so as still further to force outwards the inward projecting bone and teeth, as the patient could bear the pressure. I first took an accurate model of the mouth, and upon this the plate or splint, whichever it may be called, was constructed, embracing two of the firm teeth on the left side—namely, the first molar and second bicuspid; then, passing over the palate behind the incisors and canines, it was made to bear on the right side against the displaced teeth and bone, extending still further backwards and surrounding by a wire the second molar tooth, which had not been displaced. The plate was so constructed that it exercised pressure only on the bone and teeth which were displaced, and in an amount in proportion to the displacement—most upon the front of the broken bone and the first bicuspid, less upon the second bicuspid, and still less upon the first molar. In the accompanying illustration the relative displacement of the several teeth will be seen (Fig. 1); in the figure of the plate, or splint, the points occupied by the first and second bicuspid and the first molar are respectively indicated by the letters *a*, *b*, *c* (Fig. 2.).

FIG. 1.



Drawing from the plaster cast of the upper jaw inverted.

FIG. 2.

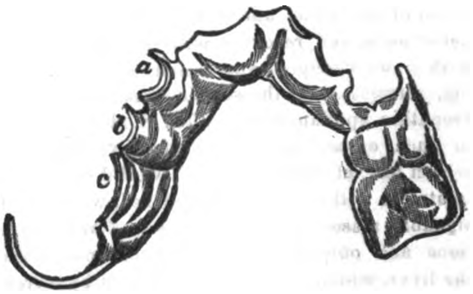


Illustration of the gold plate or splint, *a*, *b*, and *c* corresponding to the first and second pre-molars and first molar respectively.

The accident occurred on the 17th of April; I first saw my patient on the 19th, and on the 23rd the apparatus was applied. When the plate was first put on it was very tight, and produced considerable pressure on the inner side of the fractured bone, causing, however, a sense of tension rather than pain. In a few hours this feeling passed off, and when, four days after, I next saw my patient, I found the position of the parts very much improved. This improvement was followed up, and still more advanced by altering the plate—making it wider, and by adding portions of gold within the crescentic excavations that received the teeth. From this date, the 27th of April, my patient visited me about once a week, the plate having in that time ceased to produce any pressure, or exercise any influence requiring further alterations, till the 2nd of June, when, as I find from my notes, the maxillary arch was completely restored to its proper shape.

After this the plate was worn for many months—longer, I think, than was required, the patient getting used to it, liking it, and feeling it a comfort and support. I cannot, therefore, name the precise date when osseous union may be said to have taken place, but it has taken place, retaining the fractured bone in a proper position.

I do not see what other method of treatment could have succeeded in this case. Probably had no mechanical support been employed, the already-existing obliquity of the teeth would have been increased by the pressure of mastication, and certainly could not have been diminished; but by the means adopted, stability of the detached bone was secured, and its position gradually and progressively improved, till it assumed almost, if not quite, its original place.

As it seems to me, important as this mode of treating a fracture of the *upper* jaw may occasionally become, the same principle as applied to the *lower* jaw is of still greater service. Any displacement that accompanies fracture of the superior maxilla is simply a passive condition: there are no muscles attached to the upper jaw which can derange or draw out of place the broken bone. With the lower jaw, however, the case is very different. The inferior maxilla is a floating bone to which many powerful muscles are attached, and those connected with the rotating movement of the jaw—namely, the pterygoids—have a strong lateral antagonistic action. Destroy the integrity of the maxillary arch by fracture, and that antagonism ceases: the muscles on either side act independently, and draw the points to which they are attached more or less to the mesial line, and this it is which causes the overlapping of the fractured ends of the bone, often so obstinate, and necessarily with it the traction of the chin towards the side on which the fracture has occurred in the usual cases, where the lesion is in the horizontal ramus on one side. A plate or splint, and for the lower jaw I prefer an ivory one, carved to fit the interior of the arch of the particular jaw with small crescentic excavations for the existing teeth, when placed in the mouth, restores the integrity of the arch for the time being. It may be worn without inconvenience long enough to allow osseous union of the fractured ends, preventing displacement the while.

Not long since I was consulted by a professional friend in such a case as this. The fracture had occurred in the horizontal ramus, about the situation of the first molar tooth; and this tooth, as well as the second pre-molar, had long since been extracted, and the usual method of treatment—that of tying together teeth in the neighborhood of the fracture—could not be resorted to. The displacement of the jaw, and the consequent distortion of the face, were extreme. The fracture had occurred on the right side; the pterygoid muscles, being no longer resisted by the right, drew over the mass of the bone—the left horizontal ramus, chin, and anterior portion of the right horizontal ramus—towards the right side, and to such an extent that the left lower canine tooth corresponded in position to the interval between the superior central incisors. My friend and myself agreed that the best and most promising plan would be to re-connect the broken and now separate portions of bone by an ivory arch or splint, within the jaw, adapted to its precise form, and attached to the remaining teeth. This plan was adopted with the happiest results, the ivory splint being worn till union had taken place, with scarcely any perceptible malposition of the jaw.

New Broad-Street, 1860.

CLINICAL REMARKS, BY DR. BRINTON, AT THE ROYAL FREE HOSPITAL.

FATAL PERITONITIS.

THE patient a poor girl of eighteen, who some months ago exchanged the calling of a servant for the life of a kept mistress, from which she has lately lapsed into a brothel, entered the hospital yesterday, after suffering during a whole week with symptoms of peritonitis.

Her father had died of delirium tremens. Her mother, at the age of twenty-eight, and a sister at the age of eighteen, had died of consumption. She herself had had slight cough during the whole winter; during the last month of which she had emaciated. Latterly, her bowels had been constipated.

She lies on the left side, her body and thighs somewhat bowed together. She breathes solely with the upper part of the thorax, and about 36 times in the minute. Her pulse, 120 per minute, is already somewhat collapsed. Her pain, still severe and uninterrupted, has been lessened by the opium judiciously ordered yesterday by Mr. Irvine, the resident physician's assistant.

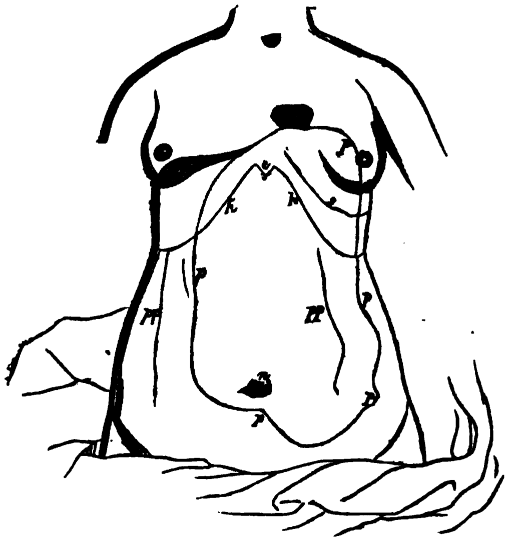
The excessive tenderness of the whole belly to pressure will not prevent a thorough physical examination of the disease. It may seem a paradox to say so, but even percussion of the abdominal wall implies very much less displacement than the gentlest palpation. Giving a patient strict injunctions to complain of any painful manipulation, and taking care to raise, as it were, the finger struck, so as to meet half way the descending blow of the other finger which strikes it, you will find scarcely the worst cases of peritonitis forbid that careful physical inquiry which is sometimes necessary to diagnosis, and never countermanded, save by its adding to the danger and pain of the sufferer. Nor is this delicacy of touch to be looked upon as a rare (though desirable) accomplishment. A physician who is too dull, or too clumsy, to do in his profession, what after all requires far less acute and practised senses than he would expect as a matter of course from a sailor, or a watchmaker, or a razor-grinder, as the by-play of their handicrafts, had better seek some other calling which, unlike Medicine, can be executed by half a man; by brains without eyes, ears, and fingers; or by intellect without compassion and sympathy.

Further on is the diagram so traced over our poor patient's inflamed viscera, without—to judge by her repeated answers to that effect—any increase whatever of her sufferings.

Now as regards the diagnosis of these cases. The symptoms, as ordinarily given in books and systematic lectures, I shall not allude to, save to point out their marked inferiority for all practical purposes to the physical signs we have just mapped out. The *decubitus*, for example, would often mislead you. And I have often seen a slow (50 to 60) pulse, a clean tongue, a moist skin, nay even such anomalies as dilated or irregular pupils, associated with peritoneal inflammation. Tenderness, again, depends on the details of the inflammation, especially the state of its exudation and the degree of its movement. Besides, it is sometimes diminished, or suspended, or removed, in a comparatively early stage of the disease, by conditions so opposite to each other as an intervening layer of liquid or a close adhesion. And it may, perhaps, have fallen to the lot of many to witness how, even in hospital practice, an old-fashioned trust in these symptoms sometimes permits the necropsy of a supposed peritonitis to show the serous membrane devoid of all roughness or congestion and everyway healthy.

Turning, then, to the physical signs of peritonitis, there are two which precede, and outlive, all others; which belong to all cases, however differing in intensity; and which therefore surpass all others as elements of the diagnosis. These are, dulness at the inflamed place, and immobility at and around it.

The first of these two is better seen in inflammations less diffuse than that now before us. The last, however, may be profitably noticed where, as in this instance, it reaches its maximum.



c, Cardiac dulness. *n*, Navel. *e*, Ensiform appendix. *l*, Hepatic dulness. *h h*, Edges of hypochondria. *p*, *p*, *p*, *p*, *p*, Outline limiting the tympanitic region of the belly, and enclosed in a region occupied by a thin layer of liquid. *pp*, *pp*, Portions of a similar outline formed by the displacement of the preceding. *s*, Curved line forming the lower border of that part of *p*, *p*, occupied by the stomach, as shown by its sound to percussion.

Looking, for example, to the abdomen of this patient, we find not only a great general distension, but a perfectly motionless condition of the whole of its anterior wall; in which even the most careful scrutiny fails to detect any perceptible movement during breathing, though each act of inspiration lifts the very bed-clothes below the neck in a way that may be recognised some yards off.

Again, tracing the common boundary line of the chest and belly shows that the diaphragm and the viscera attached to its upper and under surfaces, are so greatly pushed up as to usurp a considerable portion of the thoracic cavity; the liver being immediately below the right nipple, and the dulness produced by the apposition of the heart to the chest being far above (instead of below) the left nipple.

The dulness produced by the presence of liquid is here modified, by the thinness and wideness of the layer of lymph on the one hand, and by the tympanitic distension of the intestinal canal on the other. The canal, indeed, rises to the surface of the belly, at its middle, as shown by our diagram; stomach and bowel being plainly distinguishable from each other (at *s*) by the different characters of their sounds on percussion.

I am not at all sure that the physiology of these details has ever been accurately pointed out. If I recollect aright, it has been suggested that, abdominal movement being painful and dangerous, Nature circumvents it by a kind of breathing exclusively thoracic.

But this alleged "final cause" is defective as well as "barren" in the Baconian sense. The belly *does* move. Half the thorax does *not*. And I would even add, that the diaphragm does not so much avoid, as lose all capacity for, its ordinary movements. It is paralysed—somewhat to exaggerate its state—by a paralysis, too, which it usually shares with the lower part of the thorax, as well as with the adjacent anterior wall of the belly, and with the co-ordinate muscular walls of the digestive canal. And the paralysis thus caused by peritonitis of its lower aspect is often contrasted with phrenic pleurisy involving its upper serous aspect, in which the agony of breathing is usually deferred and diminished by a long slow, deep breathing, such as brings the whole chest into play, until checked by an effort which looks very like a voluntary one of the poor patient.

This seems, therefore, the clue to the physical signs of peritonitis: paralysis, and hence distension, of the intestines and the belly; including in the latter all its movable walls, whether muscular, costal, or diaphragmatic. Paralysis, caused by a state which also produces pain, but often outlasting it; independent of all liquid effusion, compatible with scarce any exudation whatever. Paralysis, let me add, such as rarely or never annihilates all movement, even in the enormously tympanitic bowels which seem to demonstrate an utter stagnation.

For often, as in this case, the repetition of a careful physical inquiry, three or four minutes after the outline of the liquid has been unmistakably mapped by percussion, will show that the abdomen (to all appearance as motionless as the patient) has been the seat of a great change in the arrangement of the bowels and of their surrounding exudation. Our patient, for example, has not stirred in the few seconds that elapsed since we marked out the line *p p*; and yet its distinct curves are now as distinctly replaced by those of the parallel outline *pp*, *pp*, showing a considerable intestinal movement.

Another point we may notice is, the ease with which fluctuation is detected in these cases. Whenever a skilful manipulator is in doubt about the presence of this symptom, it would, I believe, be safe to say that it is really absent. At any rate, I suspect that errors are incomparably more frequent in the opposite direction; in the affirmation of fluctuation where none exists. The "fluctuation" of the surgeon, however, is not always the "*thrill*" which seems most easy and conclusive for the physician in these cases to detect. Here, as you may feel, this sign can not only be obtained without any pain to the patient; by one light tap of the finger, with half of the hand barely touching the belly a few inches oft—but merely to place the hand gently on the belly gives you a perceptible thrill at each effort of breathing, limited as this act seems to be to the subclavian regions only.

The diagnosis not only affirms extensive (almost universal) peritonitis, but refers this peritonitis, conjecturally, to such an ulceration of the ileum as is itself a disproportionately large and early element of pulmonary tuberculosis. The scanty breathing sounds on the right side indicate the tubercle, probably deposited in both lungs, to predominate here.

The same history and symptoms which justify this opinion permit no hope of a cure. To assuage pain is almost all we can expect to do; and even in this, our success is likely to be but imperfect.

[The patient died in five days. The necropsy confirmed the above conjectures, save only as respected the quantity of liquid in the peritoneal cavity. Scanty as it had been at first, the exudation had been still further reduced by absorption before death.]

THE TREATMENT OF DELIRIUM TREMENS.

THE patient, a cabman, aged about thirty-three, long addicted to hard drinking, and now in the fourth or fifth day of his third attack of delirium tremens, affords a good illustration of some practical points in the cure of this dangerous malady.

His face is wild, flushed, and perspiring, and his noisy struggling delirium, which has been incessant during the twenty hours now past since his admission, evidently, from his language, swarms with the delusions incident to this state. Amongst these may perhaps be included that of expecting us to know all his symptoms, without any observation or inquiry, every approach to which he treats as an insult.

However, we want little oral information. His pulse, though very quick (120), is wiry rather than feeble. His epigastrium is tender. His tongue, dry and furred, with red edges, is very tremulous. These facts, taken with those just stated, and the circumstance that his present attack winds up a tolerably continuous debauch of some ten days' duration, afford a clue to what will probably be a successful plan of treatment.

Opium and the "habitual stimulus" are usually regarded as the specifics for this malady. Confessing their frequent value, I would warn you against any but their casual and deliberate use. In other words, apart from some special risks occasionally contra-indicating them in even moderate doses, in this as well as some allied states in which they would otherwise be demanded, there seem to me great perils from their copious administration as a matter of routine.

Let us try to reason out the therapeutics of the malady. How do people die of uncomplicated delirium tremens? Generally, I make bold to say, of exhaustion. And what exhausts them? The perpetual delusions, ravings, shoutings, movements of this state. It is a most invidious analogy to offer; but I venture to say that anyone who has ever spoken in public for one hour together, would, if he multiplied that hour by the factor requisite to bring it up to the many days sometimes passed in vociferous delirium by a patient, quite understand the perilous degree of exhaustion necessarily present. Besides, the morbid impressions are scarcely less injurious and fatiguing than the actions of the delirious state. Sensation, if varied and intense enough, is very hard work for the nervous system. Everyone who has ever foolishly attempted to "do" a gallery of pictures must allow that it is easy to tire out the brain through the eyes in a very short time.

The first indication of treatment, then, is to prevent exhaustion; and in fulfilment of this, there is much to do and to avoid. A comfortable room, preferably well lit as well as aired; a good nurse, with quiet, decisive, fearless manners; an absence of all that is likely to excite and irritate—if possible, that is, a separate ward. Above all, no mechanical restraint.

This prohibition cannot be too stringently enforced. No matter to what degree reason may be degraded or dethroned, the delirious patient always seems sensible of the debasement and brutality implied by straps and bands. If one nurse could not restrain a patient, I should call in two, or ask for the further assistance (always generously given) of any or every convalescent in the hospital. But I should never strap or tie down a patient, however delirious. I suppose, in the last seventeen years, I have seen and treated a fair proportion of such cases. But though I have once or twice walked up to a raging patient whom nobody had for hours dared to approach, to loosen his bonds, I never had occasion to regret it. Indeed, I have always found that the more limited temporary, and casual that graduated restraint of the patient which the hands of others afford, the better. Watching and persuasion generally suffice.

The same indication, again, dictates the drugs to be administered. That there are instances in which a delirious patient, exhausted by long habits of tippling, or prostrate under some independent disease or injury, is best treated by the stimulus he has latterly been deprived of, I do not deny.

The subject of our observations, however, not only illustrates the golden rule of Practical Physic,—to treat the case, rather than the malady, and to avoid giving such and such drugs merely because the disease is diagnosed to be so and so,—but represents, I think, that common and important variety of delirium tremens in which this routine treatment is specially to be avoided.

In plain English, when a patient comes to me with delirium tremens as the climax of a long debauch, I generally find that this state is modified by two other circumstances. He *is* more or less drunk, on the one hand; he *has* more or less gastritis, on the other.

His furred tongue, his tender epigastrium, the nausea (or even vomiting) occasionally noticed, are, doubtless, associated with a condition which I have verified after death in the gastric mucous membrane—a firm, white, condensation of the cell-growth, and a deep congestion of the adjacent vessels, such as, for want of a better term, we may roughly call "inflammation."

Both of these circumstances prohibit the administration of alcohol and opium in their ordinary forms and doses. To what purpose, when a man is already raving drunk, should we give additional quantities of the poison which has made, and is keeping him so? What, again, will opium often do, save increase this drunkenness? Combined with alcohol, opium is, for most races and idyosyncrasies, a stimulant rather than a sedative. Indeed, even when taken alone, opium often acts as a stimulant upon the Malay, the Turk, the Hindoo—aye, and on many an Englishman quite unaccustomed to its use. And I am sure that, given in any but the most overpowering or dangerous doses, it oftener increases than lessens the ravings of the delirious patient; while it certainly so far obscures the symptoms, that after its sufficient (i. e., copious) administration, you must often remain in doubt whether the patient dozes because he is half poisoned, or because he is half cured.

Furthermore, as respects the gastric lesion, what, in the name of common sense, are large doses of alcohol to do? To increase inflammation; to add fuel to the fire; to constitute an additional source of the pain, fever, delirium, sleeplessness, which gastric irritation alone amply suffices to provoke? Thus much at any rate might be alleged, that their supposed benefits could hardly be deduced or explained, by Rational Medicine, unless it were presumed that, in this instance, the general effects of alcohol counterpoised that aggravation of the local injuries which its introduction into the stomach would necessarily provoke. But to this generally beneficial effect we have already demurred; so that we need hardly point out that, granting it useful in this way, there could scarcely be a more clumsy, ineffectual, and dangerous mode of administering it, than by pouring it, in large quantities and a concentrated form, into an inflamed organ itself essential to life.

Much might, I think, be said for emetics and cold affusion in well-chosen cases of this kind. But in this instance neither of these two measures seems necessary. Two special attendants; a separate ward; a full dose (fifteen minims) of ipecacuan wine, with a little (seven minims) laudanum, and (ten minims) chloric ether, well diluted, every three or four hours; some three or four ounces of brandy; largely diluted, in the twenty-four hours; and mustard poultices to the epigastrium, are all that we need now order. A mutton chop, to be taken as soon as he wakes from his first sleep, completes the prescription.

The action of ipecacuan, thus guarded and combined, I will not now dwell upon, further than to say that it seems to effect a twofold benefit: to allay cerebral congestion and excitement on the one hand: and to provoke gastric and intestinal secretion, on the other.

[The patient became gradually calmer, and in twelve hours fell asleep. The next day he was quiet and rational. Under full diet and stout, with bark, he recovered so rapidly as to leave the hospital, cured, in five days.]

A Mirror
OF THE PRACTICE OF
MEDICINE AND SURGERY
IN THE
HOSPITALS OF LONDON.

Nulla est alia pro certo noscendi via, nisi quam plurimas et morborum et dissectionum historias, tam aliorum proprias, collectas habere et inter se comparare.—Morgagni. *De Sed. et Caus. Morb.*, lib. 14. Prooemium.

KING'S COLLEGE HOSPITAL.

OLD-STANDING DISEASE IN THE HIP IN A BOY; EXCISION OF THE JOINT; FATAL RESULT.

(Under the care of Mr. Fergusson.)

Although the subject of removal of the hip-joint by excision has already been fully illustrated and commented upon in our "Mirror," we think that the occasional record of fresh cases, with their results, will prove of service, by drawing attention more particularly to the diseases of this important articulation which require operative interference. We therefore on the present occasion give the particulars of two cases of excision of the hip-joint—that is, of the head of the femur and portions of the acetabulum —in lads of the respective ages of eleven and twelve years, both terminating fatally.

Much additional information upon the subject of the treatment of certain diseased conditions of the hip-joint by complete and partial excision of the articulation has been recently furnished by Mr. P. C. Price, in a paper read before the Medical Society of London. (See The Lancet, July, p. 62.)

The general results are most assuredly gratifying, as proved by Mr. Price's careful statistics, and we think that a larger number of patients than has been the custom heretofore should now receive the benefits of excision, when it is likely to prove successful, and to attain this end the operation should be attempted at a sufficiently early period, to afford every possible chance of success. If necrosed or carious bone is present in any of the major articulations, and, by the irritation produced, coexisting with extensive suppuration, is slowly and surely destroying life, an immediate operation for its removal should be performed, as is the common practice for necrosis or caries in any other part of the skeleton. We have endeavored to prove on many occasions the great value of the operation under consideration; but we were hardly prepared to learn of such an amount of success as has attended it, when all the circumstances are taken into consideration.

Of the cases which we subjoin, the first was one in which the constitutional powers had become greatly exhausted and worn out from the irritation of the disease; and although the boy was twelve years old, he looked only seven, and had been bed ridden for years. After the operation he improved for a time, but finally died on the fortieth day from general derangement of the chylo-poietic viscera. The operation here had nothing whatever to do with the result; but it was confidently hoped that the arrest of a continual drain on the system would have permitted the vital powers to rally, and a cure to be effected, as we have seen in similar instances.

For the notes of the case we are indebted to Mr. Francis Mason, house-surgeon to the hospital.

J. W——, aged twelve, admitted, under Mr. Fergusson's care, on Sept. 17th, 1859. He was a native of London, and stated that nine years ago, while out in a thunder-storm, he was struck by lightning, which felled him to the ground. On being raised, he was found perfectly insensible, and he imagined that in the fall his left hip had come in contact with the ground; for from the time of the accident he had more or less pain in walking, and an inability to stand on the diseased leg. These symptoms gradually increased in severity until two years ago, when he was compelled to lie in bed; so he continued up to three months before his admission, when two abscesses formed, one in the fold of the groin, the other by the trochanter major. These had discharged freely up to the time of his admission, at which period the patient was a pale and emaciated-looking boy, having, however, a cheerful expression of countenance. On examination of the affected limb, the leg was found flexed on the thigh, and the thigh flexed on the trunk. There were two openings about the hip-joint in the situation above mentioned, which discharged unhealthy pus, and led to the bare bone. Manipulation gave the patient considerable pain, but otherwise he made no complaint. He had no pain in the knee-joint; his appetite was good, and tongue clean. He was ordered nourishing diet and cod-liver oil.

Oct. 4th.—Continues much in the same state, but looks if any thing a little better. Chloroform being administered, an attempt was made to bring the limb into the straight position; this was only partially accomplished, and a distinct grating was felt in the hip-joint.

8th.—The patient continuing weak from the discharge, and not seeming to improve so rapidly as could be wished, Mr. Fergusson determined to perform excision of the head of the thigh-bone. Chloroform having been administered, the following proceeding was adopted:—An incision having been made, about three inches in length, in the usual situation behind the hip-joint, the diseased parts were readily exposed, and the head of the bone easily disarticulated. This and the trochanters were removed. On examining the acetabulum, a small piece of necrosed bone was found imbedded. This was removed, and the cavity gouged. The head of the bone was found much absorbed, the cartilages all gone, and a great quantity of matter escaped from the sinuses during the operation. A long splint was then applied on the outside of the leg.

10th.—Going on well, sleeps tolerably, and makes no complaint. Pulse 124; respiration 26.

12th.—Complains of pain in the knee-joint; the discharge from the wound is most fetid, and the patient's appetite is not so good; tongue very red; complains of great thirst.

18th.—The wound looks healthy, and it is dressed with red lotion; the discharge is profuse, and most fetid. The patient takes six ounces of brandy every day, with good nourishing diet.

26th.—The patient still continues very weak; the appetite being bad, he is unable to take anything but arrowroot and brandy; vomited very much last night. Pulse 126; bowels regular; tongue clean.

Nov. 4th.—Is much better in every respect. The discharge from the wound is not so offensive, but is still very profuse. Takes meat at dinner, and the appetite is improving; sleeps well; pulse 120.

10th.—Has not been so well the last few days. The appetite has diminished; the bowels have been purged violently, and he has vomited a quantity of bilious-looking matter. The discharge from the wound is not so profuse, but is still extremely offensive.

14th.—Is much worse; takes no food except brandy and arrowroot; seems to be sinking.

17th.—Died this morning at four A. M. No post-mortem allowed.

ST. MARY'S HOSPITAL.

EXCISION OF THE HEAD OF THE FEMUR FOR DISEASE OF SIX MONTHS' DURATION; FATAL RESULT ON THE TWENTIETH DAY.

(Under the care of Mr. Ure.)

It is most probable that, had Mr. Ure been permitted to perform the operation in the following case when he originally recommended it to the boy's parents, it would have proved successful. The disease was confined almost entirely to the articular extremity of the bone, and had been a source of intense constitutional irritation, with great suffering, leading to a rapid decline of the vital powers. He was free from any uneasiness during the three weeks that he survived the operation; and we fully believed, up to the fourteenth day, when Mr. Ure showed us the patient, that a cure would have resulted.

J. W——, aged eleven years, with fair complexion, sandy hair, and grey irides, was admitted on the 4th of November, 1859, with hip-disease. At the upper anterior third of the thigh was a fistulous opening which discharged thin sero-purulent matter. On introducing a probe, it came in contact with exposed bone, adjoining the cotyloid cavity. Six months preceding the date of admission, the patient was attacked with swelling in the above-mentioned situation, which gradually increased till it attained the size of the fist, and became red and painful. Bread poultices were applied continuously during six weeks, at the end of which period the swelling opened of its own accord, and poured out a quantity of matter. The poultices were applied for a fortnight longer, and then left off, in the hope that the opening might close. It, however, never ceased to discharge matter. There were fulness and tenderness in the region of the hip-joint, and pain was produced by pressing upon the trochanter.

Dec. 7th.—The actual cautery was applied between the tuberosity of the ischium and the trochanter.

12th.—Has been relieved since the cauterized surface suppurated; and has been able to move the limb more freely than before.

In the course of a couple of weeks he relapsed, and

On Jan. 2nd, 1860, he had lost flesh and strength; the appetite had failed; he complained much when anything touched the trochanter major; and the discharge from the fistulous opening had augmented. He was ordered, in addition to a generous diet and wine, cod-liver oil and iron.

11th.—He had been progressively getting weaker and more emaciated; the countenance was wan; hectic flush on the cheeks; night sweats; pulse small, always above 100; appetite bad. He lay constantly on the left side, with the thigh bent, and the right knee overlying the other; and suffered acutely when the slightest attempt was made to move the affected joint, or when the least pressure was made on the trochanter. The distance from the anterior superior spinous process of the ilium to the greater trochanter was found to measure, on the affected side, five inches; while the corresponding distance on the sound side measured four inches. It had been proposed, some days previously, to remove the head of the femur, but the operation did not meet with the sanction of the parents; they, however, eventually consented. The boy was in a state of constitutional prostration, and suffering greatly. Chloroform having been administered as far as could safely be done consistently with the depressed condition of the patient, Mr. Ure made a curvilinear incision with antero-inferior concavity, embracing the superior and posterior margins of the great trochanter. He was thus enabled to come upon the capsule of the joint, which was carefully opened; and then, while the thigh was flexed and adducted to facilitate this step of the operation, disarticulation was effected, and the head of the femur removed at the neck by means of bone-nippers One small bloodvessel was tied during the operation; scarcely more than a teaspoonful of blood was lost. The edges of the wound were brought together by four points of suture; a piece of wet lint and a roller completed the dressing. The head of the femur was found deeply eroded; a great part of the cartilage and epiphysis were destroyed, so that it had lost its spherical form. The synovial lining of the acetabulum felt pulpy; the round ligament had disappeared. When in bed he was ordered an anodyne draught.

12th.—Passed a comfortable night after swallowing the draught. Countenance cheerful; lies on his back with the limb slightly bent and abducted; tongue clean.

14th.—Bowels were relaxed yesterday; pulse rapid, but more full than previously; tongue clean; appetite bad. He is free from pain, but still has night sweats. To have chicken for dinner; arrowroot with brandy, a pint of milk; two eggs, and four ounces of sherry in the day, as previously.

16th.—Pulse very rapid; complains of soreness about the teeth; gangrenous fœtor from the wound; muttering delirium during the night; countenance rather sallow; urgent thirst; refuses food. To drink freely of milk.

18th.—Feels better than he did; the soreness about the gums has abated, and the thirst also; the pulse rapid and feeble; very restless at night.

19th.—Wound looks more healthy than it did, and begins to suppurate; troubled with excoriation on the knee from position; countenance good; tongue clean; pulse 140; has taken beef-tea, and also some milk, with some relish; feels no pain; slept well.

23rd.—Very feeble; countenance very pale; pulse 120; wound smells offensively.

24th.—Has rallied somewhat; pulse 140; sleeps well, however.

27th.—Feels better, but looks anxious.

28th.—Somewhat lethargic, and getting weaker.

31st.—Gradually sank and died.

There was no autopsy, as the parents took the body home into the country.

ROYAL FREE HOSPITAL.

EXTENSIVE FRACTURE THROUGH THE BASE OF THE SKULL, FOLLOWED BY OOZING OF SEROUS FLUID FROM THE EAR, AND SYMPTOMS OF COMPRESSION; FATAL RESULT.

(Under the care of Mr. Thomas Wakley.)

The cases which we here record are those in which the surgical maladies described were the result of the injuries received. The first two, implicating the head, present a strong contrast to each other; for in one (that which follows) they were of so severe a character that death ensued. This patient fell head foremost off a ladder, from a height of twelve or fourteen feet. In the second case, the sufferer fell from a height of nine feet, receiving in his descent a blow from a brick, which produced a slight scalp wound. In this case—one of common occurrence—in which a hopeful prognosis was pronounced, fatal encephalitis arose, and carried the patient off.

The symptoms in Mr. Wakley's patient—bleeding from the ear, followed by serous oozing—are pathognomonic of fracture through the base of the skull. Many examples of this we have placed before our readers on previous occasions. Very lately three cases of this kind occurred at the Westminster Hospital, with a recovery in two, one being a boy, eleven years of age, under the care of Mr. Holthouse. In him, however, there was bleeding without serous oozing, the hæmorrhage proceeding only from the ear. It is impossible to declare positively that there is fractured base, unless the general symptoms point to its occurrence.

As will be observed by the notes of the following case (for which we are indebted to Mr. John D. Hill, house-surgeon to the hospital), the fracture was most extensive, and had engaged a large portion of the skull; and the symptoms of compression of the brain were explained by finding a large clot of blood pressing upon one of the hemispheres.

William R——, aged sixty-three years, was admitted into the hospital on the 8th of December, 1859, at noon, with symptoms of compression of the brain and fracture through the base of the skull, the result of a fall (about twelve or fourteen feet) from a ladder upon the crown of the head. There was also bleeding from the right ear. About twenty minutes after admission, signs of returning animation were shown, with restoration of the pulse and breathing, &c. This reaction existed for the space of ten minutes, when the patient again sank into a state of collapse, in which he remained a quarter of an hour; after this he rallied for a few minutes, and during the day semi-consciousness kept alternating with collapse. He could be roused by strong impressions. Upon examination, there was found a large scalp wound at the point where the violence was received, exposing the parietal and occipital bones. A small scalp-tumour was present over the right frontal eminence, and several abrasions were observed about the face. There was also fracture of the right clavicle and of two upper ribs, at a vertical line drawn through the centre of the clavicle, and several contusions about the body. The breathing was excessively irregular, sometimes being quite stertorous, and at others almost imperceptible; it was chiefly carried on by the abdominal muscles. The pulse were very variable, full, and laboring, 40 in a minute, sometimes imperceptible at the wrist and carotids. The right pupil was much dilated and insensible to light; the left was quite contracted. The bleeding from the ear continued until half past five P.M., when the clear fluid (known as cerebro-spinal) was observed to flow in small quantity after the cessation of the hæmorrhage. The patient was visited many times during the day, but no change of importance observed. At night he became very restless, frequently struggling to raise his hand to his head (as if pain were there present), moaning piteously, and uttering the exclamation "O God!" As the urine was retained, a No. 9 catheter was passed, but only two ounces removed.

He passed the night tolerably, and towards morning seemed if anything a little improved, the circulation having risen ten or twelve beats, and the respiration become more tranquil. At ten A. M. he relapsed into the comatose condition, in which state he continued till death, which took place at seven P. M.

Post-mortem examination.—Upon removing the scalp and pericranium, there was found at the point of injury a stellate fracture, without depression, extending forwards through the frontal suture (which in this case was well developed) into the right orbit, thence through the roof of the orbit across the sella turcica, the petrous portion of the temporal bone, the meatus auditorius internus, and curving slightly from the course of the superior petrosal sinus to the parietal bone of the same side, and meeting the point from which the fracture was traced at a right angle. After the removal of the calvaria a large clot of blood was found extravasated between the dura mater and bone, at the site corresponding to the external injury, from rupture of the superior longitudinal sinus. There was also a clot of blood compressing the optic and orbital nerves at their point of exit from the skull. There was no wound of the lung. The fracture of the ribs and clavicle corresponded to the external made.

GREAT NORTHERN HOSPITAL.

FATAL ENCEPHALITIS FOLLOWING A SLIGHT SCALP WOUND.

(Under the care of Mr. SAVORY.)

ONE of the commonest injuries to be met with amongst the out-patients of an hospital is a scalp wound; and usually, unless the violence of the blow has been such as to produce concussion of the brain, no bad symptoms ensue. A slight wound was received by the patient who was the subject of the present case, but still the blow producing it must have been severe, for it cut to the bone, tearing through the pericranium; he was not, however, even stunned. On the eleventh day rigors commenced, ushering in cerebral symptoms, which ended fatally. For the notes of the case we are indebted to Mr. Ponsonby Adair, house-surgeon to the hospital.

Thomas F——, aged twenty-eight, bricklayers' laborer, was thrown to the ground from a scaffold about nine feet high by the breaking of one of the supports; a brick fell upon his head, causing a wound on the vertex: he was not stunned, however, but got up and walked to the hospital. The wound was about an inch and a half long, and at one point the pericranium was torn through, and the bone laid bare, but not fractured. Water dressing was applied, and the man sent home.

The wound went on well, granulating rapidly, till the evening of the 11th day after the accident (Dec. 31st, 1859), when the man had a severe rigor, and passed a very bad night.

On presenting himself on Jan. 1st, 1860, his appearance was seen to be much altered for the worse: he had a heavy, drowsy aspect: his pulse was full and very soft, beating 116 to the minute; the skin sweating, and the tongue much coated. He complained of pain over the right eye. The wound continued to secrete, being bathed in healthy pus; and there was no puffiness of the scalp. The house-surgeon ordered him to go home to bed, to have the hair cut short off, a small poultice applied to the wound, and wet cloths to the rest of the head. A smart purge was given. He was recommended to take nothing but beef-tea and milk.

Jan. 2nd.—This morning he was admitted as an in-patient under Mr. Savory. Pulse 110; respiration 25. He is much troubled with a short cough, unaccompanied by expectoration. Last night he had more rigors, and wandered much; and to-day has a much heavier aspect. The discharge from the wound has now almost entirely ceased, but the surface has still a very healthy aspect, and there is no puffiness of the scalp. His skin is moist, though not so covered with sweat as yesterday. He is quite rational, and has complete power over his limbs. The pupils are equal and active.

3rd.—Pulse 96; respiration 36. The heart's action is becoming gradually depressed, and the respiration quickened. Since the last note he has had two violent rigors, lasting for above an hour. The wound still retains its healthy appearance, though it is almost dry. There is no puffiness of the surrounding scalp. The healing process seems to have gone on satisfactorily around the portion of bone which was laid bare. Blister to nape of neck.

4th.—Pulse 90; respiration 36. Bowels frequently moved. Did not wander during the night, but complains much of disagreeable dreams, which cause him great uneasiness. No more rigors; the head is slightly hotter than yesterday; there are no signs of paralysis at present. The edges of the wound have assumed an ashen color.

5th.—Three A. M.: All the evening he was very restless, attempting to get out of bed; but now the left leg and arm are completely paralysed, so far as motion is concerned, though some degree of sensation still remains, but from his state it is very difficult to determine the amount.—Eight P. M.: More inclined to become comatose, though he still talks much and strangely. He does not now move either leg, but reflex motion can be excited. The right arm is very rigid; he still moves it about, but not so much as he did. He passes his motions and urine involuntarily.

6th.—He is now quite unconscious, but his breathing is not stertorous.—Eight A. M.; He has just died.

Autopsy, twenty-seven hours after death.—A large quantity of fluid pus in the cavity of the arachnoid; the pus was not flaky, but tolerably healthy. Between the arachnoid and pia mater, in the sub-arachnoid spaces, and in the meshes of the pia mater, pus existed all over the upper part of the right hemisphere, the posterior and lower parts excepted; along the vertical plane, forming the right boundary of the longitudinal fissure, a quantity was found at one point just behind the surface corresponding to the seat of injury on the bone; some was also found on the left side. No pus existed in the ventricles or any other part of the brain. The dura mater adhered to the bone beneath the site of the external wound. On examining the part of the skull which was uncovered by the wound, no difference could be detected between it and the surrounding bone. With the exception of a few patches of congestion at the apex of the left lung, all the internal organs were healthy.

MIDDLESEX HOSPITAL.

TREATMENT OF FRACTURED PATELLA BY MALGAIGNE'S HOOKS.

(Under the care of Mr. Mitchell Henry.)

There are many surgeons who deny that fracture of the patella ever heals by bony union, and they assert that it is always ligamentous. An examination of specimens in our museums, as well as a reference to the record of many cases in our "Mirror," will prove that firm ossific union is not unfrequently brought about. Two cases of the kind have recently occurred at the above hospital, under the care of Mr. Mitchell Henry, wherein this desirable result was produced by the employment of Malgaigne's double inverted hooked instrument, a representation of which is given in Druitt's "Surgeons' Vade-Mecum." The first of the two cases has gone out with solid union. The second, still in hospital, is a female, aged forty-seven, admitted for a transverse fracture of the patella, occurring in her right leg. The clamps were kept on for upwards of three weeks, when the broken patella was found to be perfectly united in a solid manner, without any groove or intermission to mark the site of the fracture. No inconvenience was produced by the instrument beyond slight suppuration round one of the hooks on the twenty-third day. This is a result but seldom witnessed, for we have seen the hooks in use for many weeks in Malgaigne's wards in Paris without such an occurrence. The most perfect and close apposition can be obtained by these hooks, or clamps, as they are called, and, if carefully applied, no inconvenience is complained of by the patients. The woman under treatment expressed herself as very comfortable in every way. The form of fracture most applicable for this instrument is the transverse, one that is not very amenable to the ordinary methods of treatment.

ST. MARY'S HOSPITAL.

STRANGULATED OBLIQUE INGUINAL HERNIA; MORTIFICATION OF THE BOWEL; OPERATION; ARTIFICIAL ANUS; RECOVERY.

(Under the care of Mr. Coulson.)

The difficulty of constructing trusses which shall accurately and comfortably retain every variety of rupture is admitted, and this difficulty is oftentimes the fertile source of strangulation. It is especially amongst working men that this dangerous result is found; the pain, inconvenience, or costliness of various trusses which they may have employed, and the readiness with which complete or partial reduction of the hernial protrusion is effected at the end of the day, induce them to forego the use of any truss. For many years this reduction is daily effected, until accident brings down a larger portion of bowel than usual; reduction is then difficult, sometimes impossible, and thus dangerous strangulation occurs. In the subjoined case, the strangulation was so acute as to produce mortification of the bowel and an artificial anus; the patient, however, ultimately recovered.

W. C——, aged forty-eight, was admitted into the operation ward of St. Mary's Hospital, under the care of Mr. Coulson, with strangulated inguinal hernia. The rupture was of eighteen years' standing. He had worn trusses specially made for him at different times, but they had caused him so much pain and inconvenience that, after various trials, he had entirely abandoned their use. The swelling had never greatly exceeded the size of a pigeon's egg, and the major part of it had been easily reducible, a small portion, as the sequel showed, remaining irreducible. The day before admission he found a good deal of bowel down, and was unable to return it. The taxis, warm bath, and castor oil had been ineffectually employed prior to admission. The hot bath, taxis, and chloroform having failed, Mr. Coulson proceeded to perform herniotomy. The sac was opened; no fluid escaped, and the bowel was seen to be black in color, but still retaining a glossy surface. Another portion of bowel was found in the sac, not strangulated; it was adherent and irreducible. Mr. Coulson liberated the stricture by introducing a blunt-pointed bistoury guarded by the finger, and dividing directly upwards returned the strangulated intestine, leaving in the sac the non-strangulated portion, which was firmly adherent. The incision was closed by suture, and a does of opium administered to the patient.

He slept well during the night, but next morning his pulse was 100; he complained of pain in the groin, flatulence, and thirst; the eyes were sunken, and he sweated profusely. He was well supported. It was necessary to draw off the urine.

On the third day, the bowels not having acted, an enema of castor oil was administered, which produced a copious evacuation. Pulse 130; much flatulence, sweating, troublesome cough, and pain in the groin. One suture removed. Charcoal poultices were now applied to the wound, which discharged freely a fetid matter. He was weak, and complained much of abdominal and inguinal pain. The bowels were again opened.

Next day the sutures where wholly removed, and cataplasms continued. The wound now discharged fæcal matter. As it gaped more freely, the sac was found to be partially sloughing, and a portion of intestine also. Enemata produced natural motions, but free discharge of fæcal matter existed at the groin.

After a time the wound cleaned under the applications which Mr. Coulson directed to be made to it, and began gradually to contract, so that five weeks after the operation the opening had nearly closed, and the motions passed entirely by the rectum. This lasted for some days, when the fæces once more broke through the opening in the groin, and from that time they continued to do so. Tonic and sedative remedies were adopted, and the patient was discharged in a fair state of health.

ST. GEORGE'S HOSPITAL.

THE ENTIRE GREAT OMENTUM AND PORTION OF LARGE INTESTINE INCARCERATED IN AN INGUINAL HERNIA; RECOVERY AFTER OPERATION.

(Under the care of Mr. Prescott Hewett.)

It is a common circumstance to meet with portions of omentum in hernia, and sometimes it alone constitutes the tumour which is strangulated. A case of this kind in an old woman, under Mr. Stanley's care at St. Bartholomew's Hospital, is recorded in a previous "Mirror," (The Lancet, vol. 1., 1859, p. 144.) In that instance it was found necessary to remove the protruded omentum, as it was in a gangrenous condition.

The following example is one of old-standing hernia, becoming strangulated, and consisting of the whole of the great omentum, with a knuckle of bowel derived from the transverse colon. The omentum was highly congested; reduction was accomplished without division of the ring, and a good recovery ensued. Many surgeons of authority recommend that the omentum be not returned into the abdomen if the mass protruded be very large, or if it be hypertrophied or otherwise altered in structure, as well as being congested, from the fear of the supervention of fatal epiploitis. In the present example, however, there were no adhesions, and the protrusion, although very large and much congested, was quite recent. The course pursued, therefore, was preferable to excision of the omentum. The case affords another illustration of the variety and differences constantly presented in cases of hernia. The notes were furnished us by the surgical registrar of the hospital.

T. H. W——, aged forty, was admitted on the 7th of February, in the evening, with a large strangulated hernia. Has been the subject of an inguinal hernia for twenty years, which he has always been able to reduce, and for which he has never worn a truss. Has had delirium tremens three times, and is constantly drunk. At twelve o'clock on the day of admission (previous to which hour he had been drinking very hard), he found the hernia down, and was unable to reduce it. He sent for a surgeon, who used gentle taxis; but finding he could not reduce it, ordered some medicine. At three P.M. vomiting came on, and continued without intermission up to the time of admission. The bowels had acted freely since noon. On admission, at half-past nine P.M., there was an inguinal hernia on the right side, about the size of an orange, which was not very tense or tender. On examination, it was evident that the tumour was principally omentum; ice was not then applied. He had some tenderness of abdomen, which was soft; the tongue was brown and dry; pulse 50, small and weak. A consultation was held at a quarter-past ten, and chloroform was given at once, in the hope of reducing the tumour. This was not effected; therefore herniotomy was performed. On laying open the sac, an immense piece of omentum protruded, which was very much congested; and in pulling this out a small piece of the transverse colon was found. This was reduced without dividing the ring, and the whole of the omentum was returned. The wound was brought together with sutures, and thirty-five minims of tincture of opium were administered.

Feb. 8th.—Passed a good night; pulse quiet, 84; tongue clean; no pain in abdomen; slight redness of scrotum, which is a little tender. Ordered, beef-tea, two pints.

9th.—Slept well; no pain; redness less; pulse good; skin moist.

11th.—Sutures removed; wound almost healed by first intention: the ligatures not yet separated.

14th.—A ligature came away; two days after, the second ligature came away; and by the 20th, the wound was perfectly healed.

On the 24th, he was discharged cured.

MARYLEBONE INFIRMARY.

THREE CASES OF STRANGULATED FEMORAL AND INGUINAL HERNIA; HERNIOTOMY.

(Under the care of Mr. Henry Thompson.)

The following are three widely differing cases of strangulated hernia, which present some features of interest by illustrating the effect of age and condition on the ultimate result of the operation. At the Marylebone Infirmary hernia occurs frequently amongst very aged and infirm, and even paralytic, patients, and in consequence a class of cases is there seen differing somewhat from the ordinary examples found in hospital practice.

Case 1.—L. P——, aged seventy-five, a paraplegic woman, had been constipated and complaining of pain for some days; recently there was much depression; and fæcal vomiting came on in the evening of Nov. 24th, 1859. An old femoral hernia was observed in the groin, the appearance of which was not, however, altered.

Nov. 25th.—Early in the morning she was seen by Mr. Thompson, who operated in the usual manner, but was compelled to open the sac; a small knuckle of highly congested bowel was returned; some omentum adhering to the sac was left in the wound.

26th.—Much relieved; no vomiting.

27th.—Bowels opened naturally. She takes fluid nourishment.

On the following day she was weaker, and died on the 29th.

30th.—*Post-mortem.*—About two or three inches of ileum had been strangulated, of which the marks were evident. Soft lymph had been effused in places between the bowels and the omentum in the wound, but no reparative action appeared to have been set up in the strangulated portion.

Case 2.—J. W——, a man, aged seventy-one. He had been the subject of left inguinal hernia for forty years, and for a few years on the right side also.

Nov. 29th, 1859.—Eight P.M.: The left hernia came down with coughing this time last night. Great pain has existed ever since. The tumour is now tense and tender; the abdomen also. There was no vomiting.

Finding the taxis ineffectual, Mr. Thompson decided to operate at once. He reached the seat of strangulation with a little difficulty, as it was situated high up, proved to be very tight, and the patient was very fat. The bowel, which was of a deep-claret color, was returned. No omentum was seen.

Nov. 30th.—Pain in the belly, and a little sickness. To take opium every three hours.

Dec. 1st.—Much the same; has passed flatus.

2nd.—Better; the pain gone; no sickness; takes beef-tea.

3rd.—The bowels have acted; little pain.

5th.—The bowels disposed to act too freely. Ordered catechu and opium.

7th.—Report as before.

10th.—During the last three days the diarrhœa has continued in spite of all efforts to check it. To-day there has been more pain, and he is decidedly weaker.

11th.—Died.

12th.—*Post-mortem examination.*—A segment of ileum, about four inches long, had evidently been strangulated and unable to recover itself; the coats of the bowel had softened, were becoming gangrenous, and at one spot were on the point of perforation; in fact, it appeared to have given way, either in removing the body or during examination.

Case 3.—E. W——, aged forty-eight, a washerwoman, has noticed "a lump" in her right groin for three or four years, but has never worn a truss. She was admitted on the evening of the 26th of January, with the following history:—The lump became suddenly larger and painful on the morning of the 23rd; at night vomiting came on, and has continued ever since; it has been stercoraceous for thirty-six hours. There has been no motion since the morning of the 23rd; purgatives have been freely taken. The abdomen is now tympanitic, distended, and very tender; powers of life low. Altogether the case was much more unpromising in all its characters than the preceding. Mr. Thompson operated at once, and, opening the sac, returned a small knuckle of intestine. A full dose of opium was immediately administered.

Jan. 27th.—Pain relieved; no vomiting since operation; but takes beef-tea.

28th.—The same; she says flatus passes; no pain.

29th.—Bowels operated naturally.

Feb. 3rd.—The wound has nearly healed; the bowels have acted regularly, and the patient feels as well as usual, but rather weak.

In Cases 1 and 2 there can be no doubt that the fatal result was mainly due to insufficient vital power to restore the mischief done by inflammation to the bowel, which, in one, showed little disposition to recover, and in the second altogether failed to do so, and sloughed. The ages, it will be observed, were seventy-one and seventy-five respectively. In Case 3, aged forty-eight, although the strangulation had existed for a longer time—indeed during four days—and the symptoms were very severe, a rapid and excellent recovery took place.

ST. BARTHOLOMEW'S HOSPITAL.

CHRONIC PYELITIS OF THE RIGHT KIDNEY, FREE FROM COMPLICATION; PERSISTENCE OF PUS IN THE URINE.

(Under the care of Dr. Farre.)

The presence of pus in the urine is always a sign of some significance, more particularly when its source is determined to be the mucous membrane of the pelvis and calyces of the kidney. This affection, under the name of pyelitis, has been familiar to the profession for many years through the labors of M. Rayer. Its causes are numerous; it occurs at various periods of life, and may be confined to the whole or part of the pelvis, or, indeed, to a single calyx; occasionally it affects both kidneys.

It is important, if possible, to determine the cause of this disease, as a guide to treatment. In the following example it was not clearly made out. The patient was not scrofulous, he had received no injury to his back, there was no history of his ever having lain in wet, no evidence of stone in the kidney or gravel, and neither numbness of the thigh nor retraction of the testicle. Dr. Farre believed that the probable cause was a chill when heated; and, from the general symptoms, diagnosed its seat to be the right kidney. In the *pyelitis* of Rayer, the testicle is asserted to be more frequently retracted than in actual nephritis.

The case is recorded as an illustration of the extreme difficulty experienced in relieving the urinary symptoms when the disease has become chronic, although the patient's general health was much improved by the treatment pursued. He then became an out-patient, the urine still containing a small quantity of pus, mixed with a little mucus. Of the various remedies employed, it is difficult to say which afforded the most benefit; but so long as the urine was strongly acid, the pus remained very persistent, and yet the patient was free from pain.

For the notes of the following case we are indebted to Mr. Schollick, clinical clerk:

Henry B——, aged twenty-three, of average size, but only in moderate condition, was admitted into Radcliffe ward on the 29th of September, 1859, with chronic pyelitis of the right kidney. The patient states that he had been ill for more than two months before his admission, and that for years he has been in the habit of passing urine of a red color (but never with any gravel or stones); this color always increased after extra exertion. The patient is a hammer-man, and has been accustomed to striking with a large hammer. He now (Sept. 29th) complains of pain over the region of the right kidney, which is increased by motion. He formerly experienced pain in the groin, extending up the right side in front, which was augmented on taking a deep inspiration. He states that there is no pain or retraction of either testicle, no pain at the end of the penis, and none during micturition. There is no vomiting nor nausea, but great depression of spirts. He had a fever three years ago, but his friends are all healthy.

Sept. 30th.—Still complains of pain over the right kidney of the same character; pulse 130, moderate in volume; tongue furred, swollen, and fissured down the middle; appetite pretty good; bowels regular; motions natural. Urine rather decreased in quantity; of a pale-primrose color; specific gravity 1020; strongly acid, purulent, and albuminous; the pus forms a copious sediment, which occupies one-fifth of the whole. The patient says that his urine has been in this state for about two months, but four years ago he passed blood and pus in his urine. He sleeps badly at night, has a headache, and perspires very much. Complains of a pain on the right side of the abdomen on pressure. He was ordered infusion of buchu, with five grains of bicarbonate of potass, thrice a day; and a sinapism to the right loin every alternate morning.

Oct. 1st.—States that the pain in the right side of the abdomen is much easier. Slept badly during the night; tongue furrred; bowels not open since yesterday; urine continues the same. He is not very thirsty; seems rather better, and wishes to get up.

14th.—Urine slightly acid; quantity of pus about the same. Ten minims of oil of turpentine to be added to each dose of his mixture.

17th.—Urine the same. Decoction of uva ursi was ordered three times a day.

A portion of the urine was put into a glass used for taking specific gravities, and which held two ounces and a half; in this it was allowed to settle. From Nov. 1st to Nov. 5th there was half an ounce in the two and a half ounces, or one-fifth of pus; on the 5th, without any apparent cause, there was only a drachm; on the 6th, again half an ounce; on the 9th, one drachm; on the 10th, a drachm and a half; 11th, half a drachm; 14th, one drachm; 15th, a drachm and a half; 22nd, half a drachm.

Nov. 28th.—Pus forty-five minims. He is now greatly improved in condition, and does not perspire so much.

(On the 28th October he was ordered ten minims of dilute nitric acid in decoction of cinchona three times a day, and on the 31st four ounces of wine daily. The acid was increased to fifteen minims on the 9th November.)

Nov. 30th.—Urine is excessively acid, containing a drachm and a half of pus in two and a half ounces. Ordered decoction of cinchona with five grains of bicarbonate of potass three times a day.

31st.—To discontinue the wine.

Dec. 2nd.—To have quinine mixture thrice daily.

9th.—The urine contained forty-five minims of pus in two and a half ounces. Ordered copaiba mixture thrice a day.

14th.—Pus, two drachms in two and a half ounces; the deposit is lighter than it was; urine albuminous; nothing but pus-globules can be discovered under the microscope. Ordered decoction of cinchona with bicarbonate of potass. five grains, three times a day.

19th.—Pus reduced to a drachm. Bicarbonate of potass to be increased to ten grains.

21st.—Decoction of uva ursi, with ten grains of extract of uva ursi and ten grains of bicarbonate of potass, thrice a day. His urine is still very acid.

Jan 23rd, 1860.—He had creasote for a while, but without positive relief; then hydrocyanic acid, calumba, and soda. Lime-water with milk, as a drink, night and morning. There is not so much pus, but the deposit is more gelatinous. Urine very acid. Sickness in the stomach.

Feb. 6th.—Sickness ceasing. Taking benzoate of ammonia. Urine contains more mucus, and if anything less pus. He looks well, and is fat.

13th.—Very much relieved; sickness gone; pus still present in small quantity, with some mucus. Looks and feels well in every other respect. Now to be an out-patient.

UNIVERSITY COLLEGE HOSPITAL.

GLUCOSURIA INDUCED BY THE PRESSURE OF A CLOT ON THE FOURTH VENTRICLE AND MEDULLA OBLONGATA; FATAL RESULT.

(Under the care of Dr. PARKES.)

THE production of sugar in the urine by the beautiful experiment of Bernard, of puncturing the floor of the fourth ventricle, has led pathologists to look for the same phenomenon when lesions have occurred in any way involving that particular part of the brain. We have the opportunity of placing before our readers a good and a well-marked example of the kind, and one of an extremely rare and interesting nature. We will commence, however, by stating that the urine becomes highly saccharine in coma, and that sugar can also be produced in animals which are rendered comatose. We have no doubt that a similar condition of the urine is present during the stertor of apoplexy. It has been proved that the medulla oblongata exerts a special influence on the glucogenic function, and, as a matter of course, direct pressure upon it, or upon parts indirectly connected with or originating from it, like some of its nerves, gives rise to the same peculiarity. Mere irritation of the floor of the fourth ventricle, without puncture, will produce glucosuria; pressure upon the same part will likewise induce it. We are therefore prepared to understand how the urine in the following case, on being examined after death, was discovered to contain sugar.

Dr. Pavy has found that the great sympathetic, as well as the medulla oblongata, plays an important part in the production of sugar; for if some of the large filaments of this nerve lying close to the vertebral artery are divided, the urine will become charged with sugar in twenty minutes. It is produced in a still more marked and rapid manner, however, when the superior cervical ganglion is punctured or removed.

The prominent feature worthy of note in Dr. Parkes' patient was the encircling of the medulla oblongata by a clot of blood extending into the substance of the pons, and exercising considerable pressure on the fourth ventricle and its contiguous nerves. The coma produced under such circumstances would necessarily prove fatal, and the urine become saccharine, no doubt at the time or very shortly after the hæmorrhage commenced.

In regard to the question appended to the report of this case, we may observe that, if sugar is generated in coma, whether resulting from poison or from hæmorrhagic pressure, its presence in the urine would afford no help in distinguishing between the two varieties. This is a point, however, well worthy of further investigation.

For the notes of the case, briefly taken, we are indebted to Mr. William Murray, physician's assistant.

A man, who was found lying in the street, was brought to the hospital in a perfectly unconscious state, a sudden fall being the only point ascertained as to his previous condition or present attack. The case well illustrated that form of coma in which the diagnosis between cerebral pressure and narcotic poisoning is next to impossible. Thus there were no marks of external violence, no distinct odor of spirit, livid congestion of the head and neck, and complete loss of consciousness. There was no evident hemiplegia, nor deviation from symmetry of features; the respiration was slow, stertorous, and almost wholly diaphragmatic; the pulse slow and rather weak; pupils contracted equally. Gradual increase in the difficulty of respiration went on, and death ensued from asphyxia.

The autopsy disclosed congestion of the meningeal vessels, but nothing abnormal in the brain substance; no excess of fluid was present in the ventricles; but at the base of the brain a clot was found encircling the medulla oblongata, and extending upwards into the substance of the pons Varolii, which, from its situation, as seen at the time, must have caused considerable pressure on the fourth ventricle and the course of the pneumogastric nerves; the lungs were congested, otherwise they were healthy; the heart very large, weighing twenty-three ounces, from enormous hypertrophy of the left ventricle, and its wall an inch and a half in thickness; the aorta diminished in diameter by a large calcified patch, two inches from the valve; the kidneys were healthy, of notably-firm consistence, but showing no excess of intertubular tissue on microscropic examination. The bladder was distended with urine, which was carefully examined by Dr. Harley, and found to contain sugar; the percentage was not estimated, but it was sufficient to reduce the oxide of copper freely, and to give, when the urine was boiled with potash alone, a distinct brown color. The presence of sugar in the urine is a fact of considerable importance when it is remembered that by injuring the fourth ventricle in animals artificial diabetes can be induced.

It might be asked if, in a case like the preceding, the diagnosis could not be assisted by finding sugar in the urine of a patient who was known to be free from diabetes, or any influence which might cause the urine to contain sugar?

CANCER HOSPITAL.

VARIETY AND NUMBER OF CASES OF CANCER AFFECTING THE FEMALE BREAST.

(Under the care of Dr. Marsden and Mr. Weeden Cooke.)

If any one fact more than another has attracted our attention on examining the patients at the Cancer Hospital, it is the healthy appearance which they present after being a short time under treatment, owing to the system here adopted of attending to the general health from the beginning, by good diet and tonic remedies. From the course thus pursued, the unhealthy and offensive discharges become diminished, and assume an altered character, and the constitutional powers proportionably gain strength and activity.

Of thirty-eight patients who presented themselves for treatment on the 15th ult., six were males, and thirty-two females. Amongst the former were—a case of cancer of both eyelids, of four years' duration, in a man aged sixty-two; a second instance, in a patient aged sixty-five, the globe of the eye being concealed; a case of cancer of the glans penis, of three years' duration, in a man aged fifty-four; of the rectum, in a man aged sixty seven; a case of lupus of the right eye, in a man aged seventy-three; and epithelial cancer of the lower lip, in a man aged forty.

The breast was the seat of the disease in twenty-nine out of the thirty-two females, the left being affected in seventeen, and the right in twelve, five only being in an ulcerated condition. Of those which were not ulcerated, there were probably about three which were not actual cancer, although the patient, solicited advice under the belief that they were laboring under this disease. Thus, a woman, aged thirty, had a small tumour in her right breast, which came on after suckling, four years and a half ago, but which is now diminishing after treatment. She had been subject to pain in this breast for thirteen years. Another patient, aged forty-one, possessed what was most probably an adenocele, of the size of a walnut, which began to grow when she was eighteen years of age. Whilst a third, a healthy-looking young woman, twenty-eight years of age, had irregular induration of the right breast, which supervened upon suckling her only child, and has remained persistent; it is not painful, and is not carcinoma.

The ages of the patients varied considerably; nine were under forty, and twenty over that period, the oldest being seventy-six years. In the last, the disease had commenced in the left breast two years ago, and was extirpated by Mr. Fergusson with the knife at King's College Hospital twelve months back. The patient made a good recovery and left the hospital, but the disease returned in the cicatrix three months afterwards, and at the present time it involves the neighboring parts, with the appearance here and there of prominent red and shining tubercles.

The experience of the surgeons at this hospital goes to prove that the disease returns at a much earlier period when caustics have been employed for its removal in preference to the knife; and this, we believe, agrees with the views of most of other hospital surgeons.

In many of the patients, the entire gland was affected, often much enlarged, and covered with red shining tubercles; some had undergone atrophic absorption, and the disease was kept in abeyance for years. The extent of glandular implication varied from tumours of the size of a walnut to that of a large orange.

An instance presented itself of that rare form known as the "cuirass" cancer, the disease commencing near one shoulder, spreading downwards, involving the mamma, and extending across to the opposite side of the chest, and attacking the other breast. The whole chest anteriorly was embraced by the cancer, like a cuirass—hence its designation. A good illustration of this variety is figured in Velpeau's "Cancer of the Breast," translated by Mr. Marsden; in that instance, hard or ligneous scirrhus, in plates, affected the whole of the integuments of the breast and the two mammæ, in a young woman. The age of the patient at the Cancer Hospital is sixty-four; she is the mother of five children, appears to possess a good constitution, and the disease is of two years duration. The right arm is affected with the brawny œdema characteristic of cancer, and indicates the hold it possesses on the system.

Clinical Records.

FORCIBLE FLEXION OF ANCHYLOSED ELBOWS.

We frequently observe the good effects of the forcible rupture of the uniting medium, whatever that may be (except bone), in partially anchylosed surfaces; and the measure of success which follows this mode of practice is no doubt attributable to perfect rest in an easy position being adopted afterwards until the irritation or occasionally inflammation has subsided—a plan strongly insisted upon by Mr. Brodhurst in his work upon this important subject.* Although the cases are numerous in which this method of operation is now resorted to, we would draw attention to two examples of anchylosis of the elbow, which promise to be good recoveries.

The first case occurred at St. Mary's Hospital, in a healthy man, aged twenty-five, who was admitted under the care of Mr. Lane, with his left elbow anchylosed pretty firmly at a very slight angle, arising from some former injury, believed to be fracture of the condyles, with partial dislocation of the radius and ulna. The olecranon process and outer condyle were close to each other, and the head of the radius was dislocated inwards. For all purposes the arm was useless, and it was determined to bend it, under the influence of chloroform, and to break up the adhesions. Mr. Lane observed that he was sure the attempt would not make matters worse, but that every chance was in favor of considerable improvement. There was good rotation of the radius, notwithstanding the displacement of its head. On the 25th of January the arm was flexed without the employment of much force; but on moving it backwards and forwards a grating sound was emitted, which led to the impression that good motion would not ensue. On flexing the elbow, the head of the radius resumed its natural position. In the event of success not following, another trial was contemplated; but we are glad to say that no bad consequences ensued, and there is tolerable flexion gained under the use of passive motion.

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* On the Restoration of Motion by the Forcible Extension and Rupture of the Uniting Medium of Partially Anchylosed Surfaces.

A few days later (28th January), at King's College Hospital, Mr. Fergusson put in practice the same plan of treatment for anchylosis of the elbow, the result of some old disease of the joint, in a boy aged about sixteen, and this has been attended with success thus far from the use of passive motion. There was not sufficient disease to require excision, as Mr. Fergusson observed, and the course adopted seemed to him the mildest under the circumstances. The forcible flexion was accomplished under chloroform without much difficulty, and to such an extent as to augur favorably for the future utility of the arm.

TUMOUR PRESSING ON THE TRACHEA NECESSITATING TRACHEOTOMY.

SMALL tumours existing in the vicinity of the windpipe, in the young especially, should be carefully watched; for if there is a tendency to enlargement, they may suddenly press upon this tube and cause suffocation. An instance of the kind occurred a few weeks back at Guy's Hospital. A boy nine years of age had been treated, as an out-patient, for several apparently-enlarged glands, situated about the neck, one of them being in front of the trachea. On the 19th of April last he was brought into the hospital, suffering from great dyspnœa and threatening suffocation. The symptoms were so urgent that Mr. Bryant at once performed tracheotomy. This operation, at all times one of some difficulty, was rendered more so from the position occupied by the tumour, which was pressing upon the larynx; consequently Mr. Bryant had to cut right through its middle to enable him to get at the windpipe low down. The upper surface of the pleura was felt quite close on one side, and the carotid artery and brachio-cephalic vein on the other. Notwithstanding these apparent drawbacks, the boy made a good recovery. It would be, however, a wise precaution, at a later period, to remove the remains of the tumour, lest it should give rise to any further trouble and mischief.

LACERATION OF THE BACK OF THE HAND.

A VERY severe case of laceration of the dorsal aspect of the right hand, in a stout and healthy man, was recently admitted into Guy's Hospital under Mr. Hilton's care. The injury was caused by machinery, and was followed by sloughing of nearly all the tendons of the extensor muscles at the back of the hand, leaving an extensive raw surface to heal up. In the event of this process occurring, the hand would have proved an almost useless member; therefore its conservation and improvement to some extent were attempted by operation on the 10th ultimo. There was slight motion in the little and index finger and the thumb was sound. The patient was most anxious that the index finger should be preserved, as likely still to be most serviceable to him in his avocation as an engineer. The ring and middle fingers were therefore taken away, with about two-thirds of the metacarpal bones, and the parts well brought together, thus forming a narrow hand, with a rather thick and bulky palm. This, however, Mr. Hilton thought it best not to meddle with, on account of the nature of the structures entering into its formation. The result in this instance was a good and useful hand.

CHANCRE ON THE FINGER, FOLLOWED BY BUBOES ON THE ELBOW AND AXILLA.

WHEN a sore occurs in any unusual situation, and appears to be specific, although nothing definite as to its origin may be elicited from the patient's history, a careful observation of the sequelæ or accompanying phenomena will often lead to a correct appreciation of the true nature of the ulcerated surface. A case in point has just occurred at the Westminster Hospital, which is well worthy of notice. A young man, an artizan, aged 21 years, was admitted on the 26th March with a large, suspicious-looking ulcer situated on the palmar aspect of the centre of the middle finger of his right hand. It had elevated margins, was hollow, and resembled a syphilitic chancre, yet nothing could be made out in the history to show how it originated, although the patient confessed to having had a scratch there. A considerable, diffused swelling formed at the inner side of the elbow, which proceeded to suppuration, and matter was subsequently let out; another, as large as an egg, formed in the axilla, but it remained hard and did not suppurate, these were clearly syphilitic buboes, for now a well-marked and characteristic papular eruption appeared over the entire body, not even sparing the face, and possessing the usual copper-color. The sore was treated by black-wash, and Plummer's pill was given three times a day. This treatment was followed by the healing up of the buboes, the slow disappearance of the eruption, and amendment in the glandular implication. This case is instructive as showing how we can determine the true nature of a suspcious sore, and also as illustrating the fact that the occurrence of buboes does not prevent the appearance of a secondary eruption. This point we have considered on a previous occasion.

Whilst on the subject of syphilis, we may refer to an interesting case at St. George's Hospital on the 29th ultimo, showing some of the results of that disease. An elderly woman was admitted under Mr. Tatum's care, with several old cicatrices about the face, from former syphilis. She could not open her mouth except to a slight extent, in consequence of the formation of several bands of tissue between the cheeks and gums, which were also the result of the healing of syphilitic sores within the mouth, and which so contracted during that process as to keep the jaw nearly closed. These were divided without chloroform, with the effect of completely releasing the jaw.

Medical Societies.

JUNE—JULY.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

F. C. Skey, F.R.S., President.

REPORT ON THE CONDITION OF THE PROSTATE IN OLD AGE, FOUNDED ON THE DISSECTION OF 100 SPECIMENS IN INDIVIDUALS OVER SIXTY YEARS OF AGE.

BY JOHN COCKBURN MESSER, M.D. R.N.,
Assistant-Surgeon to the Royal Hospital, Greenwich.

In order to facilitate the consideration of the details of one hundred dissections of the prostate after the age of sixty, the author had arranged them into three classes—namely,

First. Those under four drachms' weight.

Second. Those between four drachms and six drachms' weight.

Third. Those over six drachms' weight.

By so doing a broad division is at once made between those that are comparatively healthy—namely, the first and second classes; and those that are so altered as to be likely to affect the health of the patient, comprised in the third class.

In the first class there are 20 cases, giving—

	Minimum.	Maximum	Medium.
Age	60	94	76 2
Weight	4 drs.	6 drs.	4drs. 57grs.

These cases, for the most part, differed from the normal state only in point of size, and offered no obstruction to the flow of urine. The presence of small black concretions was very general in these as well as in all the other cases. In 4 cases there were slight appearances of the formation of circumscribed tumours. In 1 case abscess was found associated with stricture of the urethra. In 1 the posterior lobe showed a tendency to enlargement; but it was difficult to say whether the enlargement was more intimately connected with the prostate or with a fasiculus of the muscular coat of the bladder.

In the second class are 45 cases, which may be considered normal in condition, and which give—

	Minimum.	Maximum.	Medium.
Age	60	94	76·2
Weight	4 drs.	6 drs.	4 drs. 55grs.

None of these cases suffered from urinary obstruction connected with the prostate during life, although the bladder was often found fasciculated. In 12 of these, circumscribed tumours were observed, for the most part only slightly developed; in 3, the posterior lobe was slightly enlarged; in 1, abscess was present, the consequence of general paralysis.

In the third class are 35 cases, which give—

	Minimum.	Maximum,	Medium.
Age	60	87	75·2
Weight	6 drs. 15 grs.	48 drs.	15 drs. 2gs.

In 17 of these, the enlargement affected both lateral and posterior lobes; in 14, the enlargement existed chiefly in both lateral lobes; in 1, the enlargement affected only the left lateral and posterior lobes; in 1, enlargement preponderated in the left lateral and posterior lobes; in 1, enlargement preponderated in the left lateral lobe; in 1, enlargement preponderated in the posterior lobe. Thus it appears that 35 per cent. of all prostates after the age of 60 are abnormally large, 20 per cent. are abnormally small, and 45 per cent. are within the limits of the normal weight. This enlargement is principally caused by increase of the fibrous element of the body; the glandular also being increased in amount, but not to the same degree. This new fibrous tissue is deposited in concentric layers, and so forms circumscribed tumours. The frequency of this fibrous deposit is shown by the fact that it was present in 34 out of 35 cases of enlargement, in 27 of which it was found in the form of tumours; in 7 there was no appearance of tumours. It also appears that those glands in which the tumours are marked are liable to the greatest enlargement, as some thus affected were found to weigh 30 drs. and even 48 drs., while those in which the tumours did not appear never weighed more than 17 drs.

A comparison of the relative frequency of enlargement of the different parts of the gland shows that the lateral lobes are much more liable to be affected than the posterior; 34 of 35 cases were affected in their lateral lobes, while only 19 of the same number were affected in the posterior lobe. It is rare to find the posterior lobe enlarged while the rest of the gland is normal; only 1 such case in 35 was found. Enlargement of the posterior lobe is the chief cause of obstruction to the flow of urine; but that may also be the consequence of hypertrophy of the lateral lobes, especially when it takes the form of tumours, and they project inwards upon the urethra.

It appears, from the nearly equal average age in all three classes, that the condition of the prostate does not materially affect the longevity of the individual. A slight difference does, however, exist in favor of those in whom the gland is most nearly normal, the average in these being 76 2, and in the enlarged 75·2.

The presence of abcess in the prostate produces enlargement to a greater or less extent, seldom, however, to the same extent as fibrous deposit. The most frequent cause of abscess in the prostate appears to be obstruction to the flow of urine, either from stricture of the urethra, enlargement of the prostate, or the consequence of paralysis of the bladder. The frequency of abscess in the enlarged gland is in the proportion of 5 in 35; in those between 4drs. and 6drs., 1 in 45; in those under 4drs., 1 in 20. The causes in these cases were—stricture of urethra in 3 cases; frequent retention in 3 cases; paralysis of bladder in 1 case. Tubercle is the only other abnormal deposit giving rise to enlargement of the prostate noticed in these cases, and that only in 1 case, which weighed 24drs. A similar deposit was observed in the lungs, right kidney, and mucous coat of the bladder in this subject.

It is worthy of remark that while retention of urine, more or less complete, is the most important symptom and consequence of enlarged prostate, it is not found in every case. The proportion of men in advanced years suffering from the consequences of enlarged prostate is indeed small. Thus amongst 1600 old men, with an average sick list of 200, not more than 10 are under treatment for this disease, and half of these only occasionally. A much larger number must be affected with enlargement, as shown by post-mortem examinations of the gland. In 35 cases of enlargement found after death, 13 suffered no urinary symptoms during life, and 2 others only after the occurrence of serious lesions to the nervous system shortly before death. Although many of these cases were not greatly enlarged, some of them plainly showed that the prostate may be greatly altered, and yet the patient be free from urinary obstruction, as in 1 case, where the prostate weighed 8drs and 30grs, with prominent enlargement of the posterior lobe; in another, which weighed 19drs. 30grs., with general hypertrophy, and great encroachment on the urethra; in another, which weighed 26drs. 30grs., with the enlargement principally seated in the lateral lobes.

On considering the favorable circumstances for the formation of phosphatic calculi in cases of enlarged prostate, it is surprising that these concretions are not more frequently found. Of the 35 cases of the third class, phosphatic calculi were found in two, the largest weighing 7drs. 45grs.; in another, two uric acid calculi, of about 30grs. each were found.

Dr. Maclachlan exhibited three specimens of enlarged prostate. The first, which was that of a man aged eighty-six, was the largest which had been met with in Chelsea Hospital for the last twenty years. The man had not suffered much, but was occasionally troubled with retention of urine. On these occasions, it was generally easy to introduce an instrument, though sometimes there was difficulty, the catheter no doubt getting entangled in the transverse band, which was seen in the preparation uniting the two lateral lobes, and also finding its way into a cul-de-sac, terminating the urethra, in this specimen, immediately below where the so-called middle lobe usually exists. There was seldom impediment in micturition, notwithstanding the enormous size of the prostate, except when the man had been drinking, and then he invariably came into the infirmary almost in a dying state; it was on one of these occasions that death took place. The second specimen was chiefly interesting as it had been taken only a few days ago from a man seventy-three years of age, who underwent the operation of puncture of the bladder about four years previously. Then the obstruction arose from the enlargement of the middle lobe, which was of the size of an ordinary marble. The third specimen was taken from a case where it was also necessary to puncture the bladder, though the prostate was but of moderate dimensions. There was sometimes great difficulty in introducing a catheter even where afterwards there appeared little to account for it; the parts then seemed to be altered from their usual position by the distension of the bladder and the engorgement of the parts, and much surprise was evinced, on subsequent examination, that the instrument should not have passed easily. He (Dr. Machlachlan) thought Dr. Messers's paper valuable in confirming the opinion that, so far from enlargement of the prostate being common in old age, it was the reverse; atrophy of the gland was the rule, and hypertrophy the exception.

Mr. Henry Thompson had learned with great interest the result of Dr. Messer's careful and extended investigations. Having himself produced at this Society, three years ago, fifty prostates dissected by himself, he was extremely anxious to compare his own results with the more recent ones of Dr. Messer. He would briefly draw a comparison between them in relation to three or four points. First, the question of numerical frequency with which the enlarged prostate occurs amongst elderly men. Mr. Busk had been, perhaps, the first to question the received opinion, that it was a natural result of old age. He (Mr. Thompson) had first applied the numerical method to the question. He found 32 per cent. enlarged above 50 years of age; Dr. Messer 35 per cent. above 60. Not above twelve per cent., however, showed symptoms during life. He did not consider that the 20 per cent. of prostates found by Dr. Messer, weighing less than four drachms, were abnormally small: true atrophy was much more rare than that. In reference to the seat of enlargement, he (Mr. Thompson) had published the result from an examination of 123 specimens: the conditions found in Dr. Messer's 35 cases corresponded very closely indeed. The frequency with which fibrous tumours occurred in the large prostate was a subject to which he had drawn special attention. Dr. Messer had further investigated it, and had remarked the presence of these tumours in 27 out of his 35 cases. The question of real incontinence caused by enlarged prostate was one which had been also carefully studied. It was well known that the so-called incontinence connected with enlarged prostates, was almost invariably the overflowing surplus of a distended bladder, and indicated retention, not incapacity of the bladder to retain. Mr. Mercier, of Paris, had, in 1841, pointed out the fact, that by a peculiar formation of the enlargement, it occasionally happened that the neck of the bladder was rendered patent, and the urine all ran off as fast as it was secreted. This was excessively rare, and he (Mr. Thompson) had not met it amongst the numerous cases he had personally examined; but there appeared to be two cases amongst Dr. Messer's, which corroborated the view referred to. He begged to thank the author for his valuable contributions to the subject under consideration. The confirmation of his own researches by this paper had been very remarkable.

ON THE CONDITION OF THE BLOOD IN MANIA.

BY W. CHARLES HOOD M.D., L.R.C.P.

Physician to Bethlehem Hospital.

During the last few years, the attention of many scientific investigators has been directed to the condition of the blood in disease, and the discovery of some valuable facts has been the result. These have accumulated, and amongst them are instances which furnish support to the belief that there is some equivalent change in the blood in all diseases; and that the blood in *acute mania* forms no exception to the general rule may be gathered from the writings of Drs. Hittorf and Erlenmeyer. Much remains to be done before we can have any exact knowledge of the state of the blood in insanity, and the author, with the able assistance of his friend Dr. Marcet, has been induced to make careful analyses of the blood of six maniacal patients, during the paroxysm and in a state of convalescence, which induce him to think that the facts arrived at (not before indicated) show, that *there is a marked deficiency of fibrine during the period of maniacal excitement, and a correction of this deficiency during convalescence.* The blood was drawn by cupping at the nape of the neck to the same amount in each case, and immediately collected in earthenware pots containing about two ounces each; and it was in every instance within a few hours of extraction subjected to the same method of analysis. The six cases selected were three of "acute" and three of "recurrent mania."

Case 1.—*Acute Mania.*—W. G——, aged twenty-one, admitted into Bethlehem Hospital in December, 1856, became maniacal one month before admission. Hereditary tendency traceable in both his father and paternal grandfather. There was no apparent bodily disease. The patient was of spare habit and an excitable temperament, and had not been subject to any medical treatment previous to his admission. Nourishing diet was prescribed, and the following sedative mixture: acetate of morphia, half a grain; tincture of hyoscyamus, one drachm; camphor mixture, eleven drachms—three times a day. At the end of a fortnight, the morphia was increased to one grain, three times a day. In September, 1857, he was discharged cured.

Analysis of the Blood.

During maniacal excitement.		When discharged cured.	
Water	777·39	Water	784·93
Red particles	149·74	Red particles	110·07
Fibrine	1·74	*Fibrine*	2·20
Albumen, &c.	63·28	Albumen, &c.	90·63
Inorganic salts ...	7·85	Inorganic salts ...	8·00
Fatty matter	0·00	Fatty matter	4·17
	1000·00		1000·00

Case 2.—*Acute Mania.*—W. T——, a drum major in the Guards, admitted into Bethlehem Hospital in March, 1857; was married, and had lived a temperate life. He was very excited, noisy, mischievous, and incessantly talking. Morphia and sedatives, with full diet, were prescribed. In March, 1858, he was discharged cured.

Analysis of the Blood.

During maniacal excitement.		When discharged cured.	
Water	791·64	Water	758.76
Red particles	125·48	Red particles	140·61
Fibrine	1·55	*Fibrine*	2·75
Albumen, &c.	69·84	Albumen, &c.	87·28
Inorganic salts ...	8·98	Inorganic salts ...	8.82
Fatty matter	2·51	Fatty matter	1·78
	1000·00		1000·00

Case 3.—*Acute Mania.*—E. R——, married, and the mother of four children, was admitted into Bethlehem Hospital in June, 1857, and discharged cured in May, 1858.

Analysis of the Blood.

During maniacal excitement.		When discharged cured.	
Water	806·71	Water	800·90
Red particles	104·68	Red particles	109·32
Fibrine	1·67	*Fibrine*	1·75
Albumen, &c.	76·53	Albumen, &c.	74·99
Inorganic salts ...	7·41	Inorganic salts ...	8·89
Fatty matter	3·00	Fatty matter	4·15
	1000·00		1000.00

Case 1.—*Recurrent Mania.*—E. J. G——, a single woman, was received into Bethlehem Hospital in 1837; since which date she has been subject to repeated attacks of recurrent mania, the paroxysms lasting five weeks, and being followed by two weeks' tranquillity and apparent mental restoration.

Analysis of the Blood.

During maniacal excitement.		During the convalescent stage.	
Water	769·66	Water	811·68
Red particles	121·77	Red particles	126·01
Fibrine	1·58	*Fibrine*	2·88
Albumen, &c.	98·44	Albumen, &c.	47·54
Inorganic salts ...	8·55	Inorganic salts ...	9·31
Fatty matter	0·00	Fatty matter	2·58
	1000·00		1000.00

Case 2.—*Recurrent Mania.*—F. B—— was admitted into Bethlehem Hospital in the year 1838. The mental disease was clearly traceable to hereditary tendency. She suffers from alternations of mental excitement and tranquillity. The blood was taken in each of these states:—

Analysis of the Blood.

During the maniacal paroxysm		During the convalescent period.	
Water	784·07	Water	765·73
Red particles	123·81	Red particles	139·05
Fibrine	0·06	*Fibrine*	2·46
Albumen, &c	81·69	Albumen, &c.	81·75
Inorganic salts ...	8·62	Inorganic salts ...	8·09
Fatty matter	1·75	Fatty matter	2·92
	1000·00		1000·00

Case 3.—*Recurrent Mania.*—W. D—— was admitted into Bethlehem Hospital in June, 1841, at the age of twenty-nine, since which time he has been subject to continued attacks of recurrent mania: for a month or six weeks he will be found rational and conversable; but during the succeeding five weeks or more his entire mental condition appears to have

undergone a revolution; irritability succeeds the natural amiability of his conduct, and he assumes the habits and bearing of a congenital idiot. The analysis of the blood was made at such periods as would best represent a fair specimen of each particular state :—

Analysis of the Blood.

During the maniacal paroxysm.		During the convalescent period.	
Water	773·86	Water	779.93
Red particles	135·56	Red particles	121·65
Fibrine	1·96	*Fibrine* .. .. ,.	2·97
Albumen, &c.	79.22	Albumen, &c.	87·16
Inorganic salts ..	7·99	Inorganic salts ..	8·29
Fatty matter	1·41	Fatty matter ..	0·00
	1000·00		1000·00

On comparing these cases with those of an analogous character which have been put on record by Drs. Hittorf and Erlenmeyer, the lesson taught by them becomes more pointed and cogent.

M. Hittorf has recorded several cases of acute mania in which he analyzed the blood during the stage of maniacal excitement, and he concludes from them that there is in such cases a *diminution* in the amount of the globules, and an *increase* in the amount of water; the cases, however, show more than this, for they prove *a distinct diminution in the amount of fibrine of the blood.*

M. Erlenmeyer states that he has made 304 analyses of the blood, principally in cases associated with other internal diseases. He only details three cases; in two of them mania was accompanied by epilepsy. The conclusion drawn by Dr. Erlenmeyer from these cases, and from others not quoted, is, that augmentation in the number of red particles or in the amount of fibrine is a very unusual occurrence in insanity, and that the opposite state is the most frequent condition.

In all these cases, therefore, that have been instanced, there is a material deficiency in the amount of fibrine in the blood. Of Dr. Hittorf's seven cases, in six the amount of fibrine stands 1 ·3, 1 ·4, 1 ·8, 1 ·9, 1 ·9, 2 ·3. In Dr. Erlenmeyer's three cases the amount of fibrine stands 1 ·7, 1 ·8, 2 ·3. While of our own six cases, the fibrine *in all* falls considerably below the normal standard, as follows: 1 ·9, 1 ·7, 1 ·6, 1 ·5, 0 ·06. Surely these results express something more than an accidental coincidence.

CASES OF CEREBRAL AFFECTION CAUSED BY DISEASES IN THE REGION OF THE NOSE AND EYE.

BY DR. HERMANN WEBER.

The first case was that of a man, aged twenty-five, who was attacked by erysipelas of the right cheek, eye, and right half of the nose, on December 14th, 1850. Nine days later, when he was almost convalescent, he began to complain of a dull headache, which was followed by symptoms resembling those of acute hydrocephalus. On Dec. 28th, he was somnolent, and there was incomplete left-sided hemiplegia. On Dec. 31st, there was a marked improvement of all the symptoms; but already on the evening of the same day the patient became again comatose, and died on January 2nd.

Autopsy.—The right cavernous sinus and ophthalmic vein were distended and filled with a greyish-red coagulum, which adhered firmly to the rather thickened walls. The exterior layer of this thrombus was more discolored and crumbly than the centre, the latter being softer, and of cherry-red color. There were, besides, sero-purulent effusion in the lateral ventricles, with softening of their walls, considerable swelling and redness of the choroid plexuses, and purulent meningitis on the lower surface of the anterior lobe of the right hemisphere.

CASE 2.—A man, aged twenty-four, had contracted primary syphilis in 1845, and had afterwards suffered from secondary and tertiary symptoms. He was first seen by the author at the German Hospital in Nov., 1851, when he was affected with syphilitic ozæna and necrosis of the vomer and other bones of the interior nose. By iodide of potassium and injections he was much improved; but discontinued the treatment before he was cured. On Jan. 29th, 1852, a few days after the discharge from the nose had been "stopped up" by dried crusts, the patient was suddenly seized with headache and rigors, which were at first of a strikingly intermittent character, returning every night; but after a few days the headache became constant. On Feb. 7th, stupor, sluggishness of pupils, and pyæmic pleuritis came on. On Feb. 9th, there were, in addition, carphology, muscular twitching, ptosis of the left upper eyelid, and paralysis of the left rectus externus. On Feb. 10th, incomplete hemiplegia of the right side. The patient died on the following day.

Autopsy.—The left cavernous sinus and ophthalmic vein were filled with a greyish, crumbly substance, firmly adherent to the walls, which were considerably thickened; the centre of the thrombus of the cavernous sinus was of pulpy consistence and greyish-red color. The areolar tissue round the carotid artery and round the nerves on either side of the walls of the cavernous sinus was thickened. The lower surface of the left anterior lobe of the brain bore the signs of purulent meningitis, and the larger veins in connexion with the cavernous sinus were distended, and their contents coagulated. The longitudinal, circular, right cavernous and left petrosal sinuses contained likewise coagula, which however, were dark-red, and easily separable from the unaltered walls. The blood in the other sinuses was not coagulated; the ventricles contained only a moderate amount of fluid. Inspection of the interior of the nose was not permitted. No disease of bone in contact with dura mater. Secondary abscesses in lungs and liver; sero-purulent discharge in left pleural cavity.

The author remarked that these two cases, though different with regard to the original complaint, resembled each other in the manner of the propagation of the disease from the exo- to the endo-cranial regions, that is, the meninges and the brain. In either case he was inclined to think that the introduction of morbid matter through the ophthalmic vein caused, in the first instance, coagulation of blood (thrombosis) in the corresponding cavernous sinus; that the meningeal inflammation of the adjacent inferior surface of the hemisphere, was in both cases, and in the first case also the erysipelatous inflammation of the choroid plexuses, consequent on the thrombosis of the sinus. The author was further inclined to consider as well the thickening of the walls of the sinus and of the ophthalmic vein, as also the thrombosis of the latter, as consecutive to the thrombosis of the cavernous sinus and the changes occurring in the thrombus; the coagulum in the ophthalmic vein having the appearance of being of junior date to that in the sinus. He alluded, however, to the possibility of explaining the propagation of the disease by phlebitis.

Respecting the diagnosis of such cases, Dr. Weber pointed to our, as yet, limited acquaintance with the phenomena produced by thrombosis of the various sinuses of the dura mater. In the first case there appeared to be no symptoms directly dependent on the condition of the sinus itself; but in the second, ptosis of the upper eyelid, and paralysis of the external rectus of the same side, were observed two days before death. These phenomena, easily explained by the relation of the third and sixth pair to the cavernous sinus, the author considered as of great diagnostic value. In cases of short duration, however, these phenomena would probably be absent, on account of the sheath of areolar tissue by which the nerves in their passage through the sinus are surrounded and protected. Attention was drawn also to the incomplete hemiplegia of the opposite side, and its changing character; but this symptom was not considered as due to the condition of the sinus itself, but to the consecutive affection of the brain adjacent to it.

Case 3, was that of an infant affected with chronic discharge from the left nostril and left eye from birth, contracted probably from the mother during parturition. At the age of ten weeks, while the child appeared otherwise in good health, the discharge ceased, the left nostril becoming closed by crusts; two days after this cessation, on May 8th, 1859, the child was seized with epileptiform convulsions, succeeded by coma. The epileptiform fits became, during the following days, more frequent, the convulsions being more marked in the right side of the body, until, on the morning of the 11th, the child sneezed repeatedly, and the discharge became re-established. From this time the fits became steadily rarer and weaker, with the exception of two days, during which the discharge had again become very scanty. The principal part of the treatment consisted in the injection of warm water into the left nostril, and the frequent application of a warm moist sponge to the nose.

Case 4.—A child, eighteen months old, was suffering from syphilitic coryza (ozæna), with much sanious discharge, more from the right than from the left nostril. On December 17th, 1859, two days after the discharge had suddenly ceased (under the influence of cold), and the nostrils had become blocked up by crusts, the child had an epileptiform fit, followed by a comatose condition and incomplete paralysis of the limbs and the left side. The fits returned several times on the same and following day. The coma was continuous; but after the removal of the crusts, the application of leeches to the nostrils, and copious injections of warm water, the discharge from the nose became re-established, the fits became rarer, and did not occur any more after December 21st.

Dr. Weber observed, that although the nature of the original complaint had not been the same in these two cases, yet there was great similarity in the phenomena of both; that in both there had been chronic inflammation of a portion of the Schneiderian membrane, with considerable discharge; that in both epileptiform fits and complete coma followed, within two days, the sudden cessation of the discharge; that one side of the nose being in both cases more affected than the other, the opposite side of the body had been in both more affected; that further, in both cases the symptoms of the endocranial affection, although very severe, disappeared almost immediately after the re-establishment of the discharge. The author remarked, that it appeared to him difficult to point out the exact nature of the endocranial affection. It might be supposed that in these cases, too, as in Cases 1 and 2, there had been absorption of morbid matter through branches of the ophthalmic vein; that this had led to stagnation of the blood in the corresponding cavernous sinus, and to further disturbance of the endocranial circulation, especially on the same side, which disturbance, in infants, more disposed to convulsive disorders than adults, had given rise to epileptiform fits; that the timely restoration of the normal passage for the discharge had prevented further absorption of morbid matter. The author felt, however, that other interpretations might be given. With regard to the immediate treatment, Dr. Weber attributed great value to the removal of the crusts, local depletion by leeches to the nostrils, and, above all, to the adequate use of the syringe.

ON TYPHUS AND TYPHOID FEVERS, AS SEEN IN DUBLIN

BY HENRY KENNEDY, M.D.

The object of the communication was to show that while these types or varieties might, in the great majority of instances, be distinguished the one from the other, they were still but the results of a common poison. To the distinctive marks between the two varieties he had drawn attention, in the *Dublin Medical Journal*, as far back as the year 1837, three years before the appearance of Dr. Stewart's memoir. The arguments for the identity of the poison the author divided into general and special. Amongst the former he particularly dwelt on the fact of different types of fever coming from the one room; such as cases with and without spots, or some with dark and others with rose spots, or the congestive, nervous, and gastric fevers all existing in one family and at the same time. Amongst the special arguments the details of some cases were given where petechiæ existed together with ulcerated bowels; and also cases of the same variety where the two rashes were mixed. The author also noticed the fact that intestinal hæmorrhage was at least as common in typhus as in typhoid fevers—contrary to what is usually thought.

In conclusion, the author glanced at the views now held by many on the stimulant treatment of acute disease. He observed that the extent to which these doctrines were carried elsewhere had not reached Dublin, nor did he think they would; and he considered there were many points, directly involving the general question, which yet required the fullest consideration. Though the author did not enter at all on the general treatment of fever, he spoke of a few points having a special reference to the treatment of typhoid fever. In particular he drew attention to the necessity for making a distinction between the stimulants in common use, of which wine and beef-tea were instanced. In his experience the effects of the former were much less likely to be followed by any unpleasant results than those of the latter; and this he had remarked not only in fever, but also in some of the phlegmasiæ. The cause of this difference Dr. Kennedy attributed to the difference in the constituent parts of the two fluids. To the carbonate of ammonia he also directed attention, as being in general use; and yet, in his experience, he had found it very apt to cause diarrhœa, and latterly had entirely given it up. The medicine he now placed the most reliance on was the dilute sulphuric acid; and he had arrived at this conclusion after having tried the ordinary astringents. The acid, however, was not a new remedy. With the acid he always joined local treatment, such as leeching and blistering; nor of its efficacy—when used with ordinary discretion—had he the slightest doubt, notwithstanding all that had been recently urged against it. In the last place, the author spoke of a certain class of cases of typhoid fever in which it seemed as if the poison were flitting about the system, at one time attacking the abdomen, again the chest, or the brain. In such cases he had adopted the expedient of keeping a blister open, usually on the chest, for some days; and from this plan he had seen very marked advantage.

Dr. A. P. Stewart said that Dr. Kennedy's paper had disappointed him. It contained nothing which refuted the facts and principles advanced by Drs. Jenner and Murchison, and other writers upon fevers, and which were now generally accepted by the profession The fact that the petechial eruption of typhus and typhoid fevers might co-exist had been long known. Sometimes, indeed, it was found connected with scarlet fever and other eruptive diseases. The real point of importance in the question was this: Are the two eruptions so far identical that they might both become dark, semi-petechial, then petechial, and not disappearing under pressure? From a long observation of the two fevers, he had ample opportunities of testing the question, and he had never witnessed a case in which the eruption of typhoid fever had ever become petechial or dark. This held good even in extreme cases, the last crops of typhoid fever eruption being as bright and rosy as the first. On the contrary, the typhus eruption, as the gravity of the case increased, had a constant tendency to become dark and petechial, and did not disappear under pressure. Dr. Kennedy's paper did not contain that large basis of fact which was necessary to establish his proposition.

Dr. Murchison said that the records of the London Fever Hospital were diametrically opposed to the experience of Dr. Kennedy as recorded in the paper. During the last twelve years, four thousand cases of typhus and two thousand of typhoid fever had been admitted into that institution. Of these, seven hundred cases of typhus and four hundred of typhoid fever had proved fatal. These cases had been fully and completely recorded, and those ending fatally were examined after death. Now in no one instance had the characteristic eruption of typhus fever been observed during life, and the characteristic lesion of typhoid fever been present after death. The converse was also always found to obtain. His (Dr. Murchison's) experience of the diseases in Edinburgh was of a similar character. It was supposed by some that when diarrhœa appeared as a complication of fever the disease was necessarily of the typhoid form, and that the appearance of petechiæ indicated the existence of typhus. But this was a grave mistake. Diarrhœa was no unfrequent complication of typhus. In the Crimea typhus was often complicated with dysentery. In no instance, however, of such complication was typhus fever, as proved after death, attended with ulceration of Peyer's glands. Petechial eruptions were not characteristic simply of typhus, but existed in many diseases which were not idiopathic fevers, and they were quite distinct from the bulloid or mulberry rash of typhus fever. In a case which had been recorded in THE LANCET by Dr. Kennedy, he stated that the rash of typhoid fever was present during life, and that after death there was no ulceration of Peyer's glands. But Dr. Kennedy in this case had given a description really of the eruption of typhus fever, and hence the conclusion which he drew was erroneous. The eruption of typhus appeared all at once within a period of one or two days, continued during the whole length of the fever, and got darker every day. The eruption of typhoid fever, on the contrary, came out in successive crops, not becoming, as the author stated, converted into petechiæ on the fourth day, for by that time the characteristic eruption of typhoid fever was disappearing. The identity of typhoid and typhus fever was no more proved by the occasional coexistence of the two eruptions, than the coexistence of the eruption of typhoid fever with scarlatina, which he had observed in seven or eight cases, was proof of the identity of these diseases. Dr. Murchison then criticised with some severity the mode in which Dr. Kennedy had recorded his cases in the paper read before the Society, and contended that the descriptions which he had given were so meagre and incomplete that they could not enable us to arrive at a just conclusion as to the exact nature of the cases which he had recorded.

Dr. Webster said he wished Dr. Kennedy had entered into the question of the comparative prevalence of the disease at the present time and formerly, also the period of its attacks and the relative susceptibility of the two sexes. Fever was most fatal in Sweden in the coldest seasons, and amongst the male sex. It was most prevalent in the hot months in Spain, and was more fatal amongst females. It had always been a fearfully fatal disease in that country. In 1857, fever ravaged Lisbon, and was most severe in the month of October. Three men to one female died, women and children being rarely attacked by it. More women than men died from fever in England; but the disease was less prevalent in this country and Scotland than it was twelve years ago.

Dr. Jenner had paid great attention to the subject of fever for the last fourteen years. For six or seven years he had spent seven or eight hours daily in the Fever Hospital, and had recorded with great care each case that came under his notice. Of late years, his experience had been less extensive, but it had served to confirm the opinions at which he had previously arrived. Ample experience had proved to him, that the state of the intestines after death could be predicted from the nature of the eruption. The presence of petechial eruptions was not confined to cases of fever. It existed in severe cases of erysipelas, small-pox, and scarlet fever; but this afforded no proof that these diseases were identical. Dr. Kennedy had remarked, that in order to arrive at a full knowledge of fever, it ought to be studied all over the world; but it had been so studied. On the banks of the Bosphorus, Dr. Parkes had found that the Turkish physicians recognized the distinction between typhus and typhoid fevers. In Dr. Flint's report on fever in India, the same distinction was made. Dr. Kennedy had supposed that it was generally believed that typhoid fever was symptomatic of intestinal lesion; but this was not the case. He (Dr. Jenner) had published some of his early cases with the intention of showing that the fever and the lesion bore no relation to each other. As a patient might die of virulent small-pox almost before the eruption had appeared, so typhoid fever might prove fatal from the general disturbance of the system, with very little intestinal lesion.

Dr. Wilks had been taught that typhus and typhoid fever were identical, and he was somewhat prejudiced in favor of this opinion: but he had, on the publication of Dr. Jenner's cases, ten or eleven years ago, commenced testing the subject afresh in the wards of Guy's Hospital. The result of this investigation was his conviction that the two diseases were altogether distinct. He thought there was sufficient to establish the distinction in the anatomical differences which presented themselves—the presence of the lesions in the one case, and their absence in the other. His investigations had been sufficient to convince him that the number of cases in which there was a difficulty in diagnosing typhus from typhoid fever was less than the number of those in which it was found difficult to diagnose between fever and chest, or lung and heart disease. Whatever difficulties existed in either case were removed by the post-mortem appearances. It must be acknowledged, however, that in some instances during life there was considerable difficulty in deciding between cases of typhus and typhoid disease.

Dr. Wynn Williams had heard nothing to alter his opinion as to the non-identity of the two diseases. During the epidemics of typhoid fever and small-pox which he had observed in the neighborhood of Llamberis, the presence of petechiæ in children was not uncommon. Even when no epidemic prevailed, he had frequently found petechiæ in children, whose health had been impaired from deficiency of food or other causes. When petechiæ were present, he could never get a proper vaccine vesicle, and had found it necessary to restore the health by tonics previous to the performance of vaccination. He differed from Dr. Kennedy in thinking that hæmorrhage was beneficial. During an epidemic of typhoid fever, he remembered the case of a woman which was nearly fatal from the profuse discharge of blood from the bowels. He had succeeded in arresting it by an injection of two drachms of tannin to a pint of water. He had tried this remedy in several cases, and always with a successful result.

Dr. Barclay had no doubt that the conclusions at which Dr. Kennedy had arrived had been founded on a large number of facts. For himself he was unable to give an opinion one way or the other. He agreed with Dr. Wilks that the anatomical lesions which presented themselves constituted the most important point of consideration. When registrar of St. George's Hospital, he had made special notes of all cases of fever in that institution. A careful study of the "reports" which were issued from time to time, recording the distinguishing characters of fever spots, had convinced him that these descriptions were not in harmony with the appearances which presented themselves on the bodies of patients. With regard to the duration of the spots in typhoid fever, which Dr. Murchison limited to four or five days, he had known them last fourteen or fifteen days. He regarded as one of the great difficulties which presented themselves in coming to a decision on this question, that arising from inaccuracies in the description of these spots from the beginning to the termination of the attack.

Dr. Jenner remarked that the real point of importance was not the length of time the spots lasted, but whether they passed into true petechiæ, and became ultimately ineffaceable by pressure.

Dr. Kennedy in reply, said he could do so only generally. More than one of the speakers had stated that petechiæ were not uncommon in other diseases besides typhus fever. Whilst admitting this well-known fact, he did not see how it affected the question at issue at all. He had assumed that petechial spots when united with the symptoms of fever, constituted typhus fever; and he had yet to learn that this was incorrect. Other gentlemen thought the details of the cases too brief. But he (the author) was at a loss to understand how any minuteness of detail could alter the fact that petechiæ had been found in connexion with ulceration. The details of the cases had been purposely of the briefest, because much had to be compressed into a small space; and this was so with the last case given, even when sent for publication to the The Lancet; for he was well aware of the great pressure on the pages of that well-read journal. By some of the speakers he had been understood to say that in this last remarkable case the rose lenticular spots had become changed into petechiæ. This was an erroneous impression. What he did state was that petechiæ had been superadded to the typhoid rash. One gentleman argued that the result of pressure on the different kinds of spots was enough in itself to separate the two types of fever. He had not found this difference exist; and Dr. Watson—no mean authority—bore him out in it. He could have wished that some gentlemen present had noticed the important fact in reference to the occurrence of hæmorrhage, whether intestinal or from the nose, and which he had found at least as frequent in typhus as typhoid fevers. The meeting would observe that in anything he (the author) had advanced he did not stand alone; and for proof he referred to the able works of Huss, Flint, and Bartlett, all of whom had given cases fully as striking as any detailed by himself. In the last place, he was glad to find that some of the speakers were so familiar with the fact that the varied rashes of fever were often combined. To prove this was one of the main objects of the paper; and when it, together with the other anomalies to which attention had been drawn, were more generally recognised, he was fully persuaded that the current views of the day would be materially modified.

OBSTETRICAL SOCIETY OF LONDON.

Dr. Rigby, President.

HYDATIDIFORM BODIES FROM THE UTERUS.

Dr. Routh exhibited a specimen of hydatidiform bodies from the uterus. The history of the case was as follows:—Mrs. B——aged thirty-five, a laundress consulted Dr. Routh on the 22nd of March, suffering from menorrhagia, with slight procidentia. She had weaned her child on the 15th of July last, on the day preceding which the catamenia occurred. They did not again recur till the beginning of October. She, however, believed herself pregnant. The discharge persisted, off and on, till the time when she sought advice, never ceasing for longer than four days at a time. On the 1st of May she was examined: diagnosis—a blighted ovum of two or three months. She miscarried the next day, Dr. Clarke, of Adelaide-terrace, Notting-hill, attending her. There was a good deal of hæmorrhage. A large number of hydatidiform bodies escaped during the miscarriage; and a considerable number were found, as usual, attached by small pedicles to the membranes; these were of a pinkish hue, and contained an albuminous fluid of an acid nature. The case did well.

ENORMOUS FIBROUS TUMOUR OF THE UTERUS.

Dr. Graily Hewitt exhibited, for Dr. R. Uvedale West, of Alford, a very large fibrous tumour connected with the uterus. The patient, a married woman, aged fifty-three, died from hæmorrhage. The tumour had existed for nine or ten years. Menstruation had been profuse, though somewhat irregular, up to a year ago, when it ceased. The tumour, connected, but not very intimately, with the cervical part of the uterus, and of an irregularly globular shape, measured forty-two inches in circumference, and sixteen in diameter; it weighed forty-two pounds. On examining the tumour, Dr. Graily Hewitt had ascertained that its structure was that ordinarily found in fibrous growths connected with the uterus. The vagina appeared to have been drawn upwards and narrowed considerably, so much so that the os uteri could not be reached by the finger. It seemed probable that the fatal hæmorrhage resulted from rupture of one of the very large vessels which passed into the pedicle of the tumour, and which lay close to the vaginal wall.

Dr. Graily Hewitt also exhibited two other specimens of Fibrous Tumour of the Uterus, in each of which several tumours were attached to the uterus by pedicles of varying length. These latter specimens were exhibited for the purpose of showing the extent to which tumours originating in the uterus were occasionally separated from that viscus.

A DESCRIPTION OF TWO FŒTAL MONSTERS.

BY T. H. TANNER, M.D.,

Assistant-Physician for the Diseases of Women and Children to King's College Hospital.

The first specimen which the author exhibited was an excellent example of a double monster. In this obstetrical curiosity all the parts were in duplicate, with the exception of the thoracic and abdominal cavities and their contents. The organs of generation—those of a female—were complete in each infant. There was one umbilical cord and placenta.

After some observations on the origin of these bodies, attention was directed to the second case which proved to be a good example of congenital umbilical hernia. The fissure in the abdominal parietes, though large, was seen to be limited to the epigastric region above the umbilical cord. This is just the part which naturally remains the longest open; but in the present instance an arrest of development had prevented the closure at that stage when a portion of the abdominal viscera is contained in the sheath of the umbilical cord. Below the umbilical region the integuments were in a healthy condition. The hernial sac had been formed of two coats—that is to say, externally by the amnion, and internally by the peritoneum. They had ruptured, so that the contents of the hernia were shown to have consisted of the intestines and liver, while at the upper part was the heart.

CYSTIC WITH MALIGNANT DISEASE OF THE OVARY.

Dr. Priestley exhibited an ovarian tumour removed from the body of a patient who had died in the Samaritan Hospital with all the symptoms of peritonitis caused by perforation. The tumour was united at its inferior portion with the posterior surface of the uterus. Here was a quantity of deposit, supposed to be of a cancerous nature, which was breaking down into the peritoneal cavity, and had effected an opening into the bowel. The intestines were glued together by recent lymph, and the interior of the largest ovarian cyst was lined by beautiful meshes of the same material. He considered a further examination necessary to determine if the softened deposit were really cancerous.

ON PHLEGMASIA DOLENS.

BY W. TILBURY FOX, M.D., (UNIVERSITY MEDICAL SCHOLAR.)

The paper commenced with the statement that the general prevailing opinion that phlegmasia dolens was a disease dependent upon inflammatory changes (the result of local or general causes) in the vessels was too limited. The author passed in review the various states in which phlegmasia dolens occurred—viz.:

1. As the sole local disease—ex., after abortion, removal of polypi, &c.
2. As part of a general disease, (*a*) either of virus origin—ex., puerperal fever, erysipelas, dysentery, &c.; (*b*) or abnormal nutrition—ex., cancer, phthisis, &c.
3. As complicating other local diseases—ex., iliac abscess, dislocations, suppressed menstruation, &c.

A principle was then noted, clearly defined, upon which its evolution depends—namely, the existence of obstructive disease in both veins and lymphatics. The causes of this obstruction might be ranked as extrinsic and intrinsic in regard to the vessels; the extrinsic being compressed under the head of pressure from without; the intrinsic, all producing coagulation, being subdivided under the heads of—

1. True phlebitis conjoined with angeioleucitis.
2. Thrombosis.
3. A mixture of these twain.
4. Preternatural coagulability of the blood doubtful (merely a favorable condition.)

The main point insisted upon was that phlegmasia dolens, except in its epidemic form, is in the majority of cases a pure thrombus, produced by sudden absorption of morbid fluid, the (compensating) effect of sudden loss; the class of cases in which it occurs, viz., diseases accompanied by breach of surface—ex., after labour, cancer, phthisis, dysentery, after removal of polypi, being especially favorable to such an occurrence. This mode of production applies equally well to many cases of œdema, which pressure leaves unexplained, the difference between the two cases being that in phlegmasia dolens the lymphatics are involved in addition to the veins.

The President observed that the subject of phlegmasia dolens was one of considerable extent and intricacy. The peculiar tense swelling of a limb known by this name occurred under different pathological forms, and arose from different causes. In some cases it arose from venous, in others from lymphatic, obstruction. He had lately seen a case of phlegmasia dolens affecting the arm of a patient with a remarkably feeble circulation, although a fine healthy woman to look at. It was precisely one of those cases of coagulation in the veins which Dr. Humphry of Cambridge had lately described in his excellent paper. He had followed Dr. Humphry's practice of giving ammonia for the purpose of dissolving or breaking down these coagula, and in the present instance had combined it with bark with the best effects. He had also lately seen a singular case, in a man of temperate habits, not only affecting the right arm so that he could scarcely put it into a sling, from the impossibility of bending it, but implicating also both sides of the neck and face. He had availed himself of Dr. Burrows' great experience, who, after a careful examination of the case, and having ascertained the absence of sound on percussion and auscultation over a circumscribed space corresponding to the anterior mediastinum, had diagnosed the presence of some malignant disease in that direction, which had compressed some of the large venous trunks. He could not help thinking that the rapid and enormous swelling from venous congestion which followed the bite of a venomous snake was in great measure due to the coagulation of blood in the veins of the bitten part. There could be no doubt that phlegmasia dolens was frequently caused by the absorption of putrid matter, as seen after labour and occasionally after malignant disease of the uterus. In this latter case it never occurred whilst the patient had strength to sit up and walk about; but when the advance of the disease confined her to the horizontal posture, the putrid discharges collected in the vagina, and absorption was apt to follow.

Dr. Graily Hewitt had devoted considerable attention to the subject treated of in Dr. Fox's elaborate paper. There were two questions for solution—the one being the *nature* of the pathological changes which take place in phlegmasia dolens; and the other the *cause* of these changes. With reference to the nature of the changes observed, he conceived that they consisted in coagulation of the blood within the veins, alone, and he could not admit that the lymphatics were primarily or necessarily affected. The arguments used by the author, on this point, did not appear to him by any means convincing: the fact that phlegmasia dolens had not been observed in certain cases of obliteration of the lower cava, did not of necessity support the view of the question put forward by the author. The appearances presented were due to coagulation in the veins, and almost complete obstruction to the circulation. These changes were now known, chiefly in consequence of the researches of Virchow, to be due, not to phlebitis, but to coagulation. Then as to the cause of the coagulation, the author had, he believed, correctly, as well as ingeniously, explained that it might be produced by the action of septic matter introduced into the cavity of the veins; but he would himself explain the occurrence of coagulation in the veins in that series of cases, or certainly a large proportion of them, coming under the notice of practitioners in midwifery, in another way. Two years ago he had published in THE LANCET some remarks "On Coagula formed in the Veins during the Puerperal State," and of several causes there alluded to as leading to the coagulation.

in question, he would now refer only to two—one of these being deficient contraction of the uterus after delivery; and the other, the occurrence of hæmorrhage. The influence of deficient contraction was very important. The uterine sinuses remaining patent, were necessarily filled with coagula, and these coagula, of small size normally, were, in case of deficient contraction, much larger. The coagulation spread upwards from these nuclei, and, when the iliac veins became invaded, the phlegmasia dolens occurred. The existence of these large, loose coagula, he would remark, also favored the introduction of septic matter. Then, again, in cases of hæmorrhage, the tendency to the occurrence of coagulation in the veins was, as he had endeavored to explain, increased; but he believed that this resulted rather from the loss of contractile power in the uterus, the effect of the hæmorrhage, than from absorption of septic matters. Hæmorrhage, undoubtedly, favored absorption, although, perhaps, not to the extent insisted on by the author. The recognition of the effect of imperfect contraction of the uterus in inducing coagulation, he conceived to be of great importance in practice; and he believed that phlegmasia dolens would be rarely observed if steps were always taken to secure due contraction of the organ after delivery.

Dr. Druitt said that phlegmasia dolens was usually treated of as an obscure and intricate disease, but that most of the obscurity arose from the unfortunate circumstance that it had been too much treated as if it were a puerperal disease solely, and had not been viewed in its true relation to other diseases; whereas it was by no means confined to the puerperal state; and, instead of being altogether *sui generis*, it was but one specimen of a very large and natural pathological family. Certainly the author of the paper before the Society had not fallen into the former of these errors; on the contrary, the Society had to thank him for a very copious and interesting collection of cases occurring from various causes besides parturition; but, as regards the true pathological place of the disease, the author seemed to have just missed seeing it. It appeared to him (Dr. Druitt) that it was impossible to regard phlegmasia dolens otherwise than as one member of that class of pathological exudations which includes also the diffuse inflammation of the areolar tissue, the phlegmonous erysipelas, carbuncle, and the effects of snake-bite which last the author had alluded to, although he did not seem to appreciate the fact that it afforded a complete solution of the phenomena of the disease under consideration. A poison introduced into the areolar tissue, whether locally or through the medium of the circulation at large, was all that was required to explain the phenomena. What was there more wonderful in phlegmasia dolens than there was in the fact that a small portion of decaying lobster introduced into the stomach sufficed to cover the skin with the large white blotches of urticaria? or that a small portion of virus introduced under the cuticle will produce the enormous swelling of erysipelas or diffused inflammation? or, again, that a snake-bite will cause a whole limb to swell suddenly and enormously? The analogy of these cases to phlegmasia dolens is absolutely perfect. In one case which the speaker published in the "Surgons' Vade-Mecum," a gentleman had a small, old sinus in the ham; this festered; the matter putrefied; swelling ensued, spreading upwards as well as downwards, till the limb was of enormous size, tense, and firm; symptoms of general pyæmia followed, and death. Now in this, as in the other analogous examples, could it be said that obstruction of the veins or lymphatics was the essential condition of the disease? Surely not; for obstruction of veins and lymphatics might exist without phlegmasia dolens,—and exudation, which was the essence of phlegmasia dolens, might exist without venous obstruction. It was quite a return to the pathology of the sixteenth century to assert that obstruction was the cause of a true pathogical exudation. Obstruction must always produce its mechanical effects, such as œdema; but but there was no obstruction which could account for the phlegmonous erysipelas or carbuncle, and the assumption of obstruction as the cause of phlegmasia dolens was unnecessary. Solidification of the blood in the veins occurred in erysipelas as in phlegmasia dolens, but only as a concurrent effect. The true pathology of the disease was that which the author had touched, without grasping—namely, that a poison having been imbibed from a wound or ulcer, produced not merely coagulation of blood in veins, but that yet undefined change in the relation of the blood and tissue which caused a peculiar exudation. No one in the present state of pathology, can pretend to define that condition absolutely; but if any one thing appeared at the present day certain, it was that not mere obstruction, or any other change in what was called the "action" of the bloodvessels and absorbents, could generate a true pathological exudation, to which class the disease under consideration belongs.

Dr. Barnes thought that the paper was an excellent example of the advantage of seeking for illustration of what might appear a special subject in the wide range of general pathology. Obstetric science had lost much from the narrow exclusive manner in which it was cultivated. While the author deserved praise for his research, he (Dr. Barnes) could not, however, but feel surprised that no reference had been made to the valuable essays of Mr. Henry Lee and Dr. Mackenzie. The essay of Dr. Mackenzie especially must be regarded as the most admirable and complete contribution to the pathology of phlegmasia dolens yet published. The speaker did not agree in the suggestion that hæmorrhage disposed to phlegmasia dolens by favoring imperfect contraction of the uterus, and the consecutive propagation of the coagula formed in the sinuses to the pelvic veins. Hæmorrhage acted, in his opinion, by increasing the absorbing function. The treatment by ammonia referred to by the President, he had found the most useful. Since the researches of Dr. Mackenzie this plan was established on a sound pathological basis.

Dr. Fox, in reply to the objections of Dr. Graily

Hewitt, said he could not disallow the lymphatics a share in the disease. Would Dr. Hewitt explain the difference in the character of the swelling in obliteration of the inferior vena cava and innominate vein, (for there was a difference; in the latter case the swelling was different from œdema, and more like phlegmasia dolens,) except upon the fact that the lymphatics were obliterated in the case of the innominate? Then, again, Dr. Rigby's well-known case (*Medical Gazette*, 1835), where no disease but that of the lymphatics existed, was surely sufficient to establish the participation of the lymphatics. In regard to the theory of the production of phlegmasia dolens, Dr. Hewitt's explanation would only account for the puerperal cases, and not those of cancer, phthisis dysentery, ulceration, &c. The other objections of importance came from Dr. Druitt. who denied the mechanical cause of the disease. Well, what answer could be made to such cases as that described in the paper, where a cancerous tumour pressed on the iliac vessels, and where phlegmasia dolens appeared, with great pain; but when the tumour descended into the pelvis, and got up behind the bladder to the other side, the pressure being removed, the phlegmasia dolens went at once, with the pain. With regard to the other point which Dr. Druitt said the author had missed—namely, the pathological state, the exudation in the cellular tissue—it was far too important a subject to be introduced into the paper cursorily, because it involved all the late views of Virchow, but it should be dealt with specially. All discussion turned upon the use of fibrin in the economy. Virchow. Zimmermann, Cappie, and Simon believe it to be a result of cellular tissue (an early condition being fibrogen,) and brought to the blood by the lymphatics. That fibrin was not excrementitious seemed evident from the following:—1. Its use in the economy and capability of organization. 2. Its mode of production—namely, result of elaborative (digestive and glandular) act, and oxidation of albumen (Gairdner). 3. Its chemical composition, unlike waste products (ex. urea). If fibrin were excrementitious, albumen must be so too. 4. Its relation to the pale corpuscles, being increased or decreased in direct ratio with them. 5. Its relation to connective tissue, as shown by Liebig; hence it is the pabulum of areolar tissues. 6. In the lower animals we see corpuscles existing before fibrin in the blood; in the articule series we get fibrin, and with it the colorless nucleated cell; and seeing always that the pale corpuscles keep in the blood-stream outside—i. e., next the walls,—it seems not unlikely, indeed certain, that the pale corpuscles are related to the tissues outside in preparing the fibrin for the *connective* tissues. Where areolar tissue is, there are lymphatics, and *vice versâ*; hence there must be some close connexion. It seems that when the arterial blood reaches the areolar tissues, the latter draw upon it for pabulum, and the excess is removed by the lymphatics (which keep the balance of nutrition correct). Obstruct, as in phlegmasia dolens, the lymphatic circulation, and you get hypertrophy of the cellular tissue and gelatinization in the areolæ. As to Dr. Druitt's assertion that the vessels are not all concerned, that was a new pathology. How would he explain a simple case of hypertrophy from congestion the result of pressure? The author had not made a microscopic examination of the juices exuded from the limb in phlegmasia dolens.

PATHOLOGICAL SOCIETY OF LONDON.

MR. FERGUSSON, PRESIDENT.

PRIMARY CANCER OF THE HEART.

Dr. Fuller related the case of a patient admitted under his care at St. George's Hospital, detailing the symptoms during life, which were somewhat obscure. After a short residence in the hospital, the patient died, and a large encephaloid tumour of the heart was found; it was primary; it penetrated the walls of the left ventricle, almost replacing the muscular tissue, and involved more or less the other cavities. There was no malignant disease in any other part of the body.

RUPTURE OF A HERNIAL SAC.

Mr. N. Ward showed a preparation from a patient above seventy years of age, who accidentally fell while walking, and received a blow on the tumour of an inguinal hernia. Collapse followed, and he died fifty-five hours after the accident. After death, an enormous hernia was found, containing a great part of the large intestine and of the small intestines. There was no peculiarity. There was much infusion of blood from the rent in the sac.

ABSCESS IN THE WALLS OF THE ABDOMEN.

Dr. Coote exhibited a specimen which occurred in a case where it complicated cancer of the stomach. It was situated in the left hypochondrium. The pyloric end of the stomach was adherent to the abdominal walls at the spot in question, and abscess was produced, but there was no communication between the internal disease and the cavity of the abscess.

PERICARDITIS IN BIRDS.

Dr. Crisp showed several specimens, remarking that he believed the observation of such diseases in the lower animals would be found to throw much light upon human pathology. The disease in question was very common in birds, for which he believed there were obvious physiological reasons. The subjects of the disease exhibited were the Muscovy duck and the black swan. Dr. Crisp described the microscopical appearances seen in the lymph thrown out, and remarked on other particulars observed.

A conversation took place on the influence of domestication upon the production of disease amongst animals, in which Mr. Partridge, Dr. Schulhoff, Mr. Fergusson, and Dr. Crisp took part.

HÆMATOMA AURIS.

Mr. Toynbee exhibited a specimen of this disease, which is often connected with disease of the brain—more generally so, perhaps, than is usually believed.

It is stated never to be found amongst the female patients in lunatic asylums, but only in the males.

CANCER OF THE LUNG.

Dr. Bristowe exhibited this specimen to illustrate a peculiar mode by which cancer sometimes affects the lung; that is, by a deposit along the course of the tubes mainly; other parts of the lung were but slightly affected; while all the tubes, large and small, were thickened and rendered opaque by the deposit in question.

DISEASE OF THE PULMONARY ARTERY.

Dr. Bristowe also showed an example of much more considerable disease of this artery than is rarely seen, from a man aged fifty-nine. The symptoms during life were chiefly those of bronchitis and some œdema of the extremities. The vessels had much atheromatous deposit, but it was not so in the systemic system of arteries.

FRACTURE OF THE ACETABULUM.

Mr. Holmes showed a preparation of the os innominatum in which the acetabulum was largely fractured. The signs during life were somewhat obscure; those of fracture of the femur were absent, although the injury and the age of the patient seventy, were such as indicated its probability. He gradually sank, after the formation of abscesses in the shoulder and elsewhere. The two extremities were of equal length. The capsule of the joint was full of pus, but was not lacerated.

Mr. Partridge related an interesting case of similar fracture in a young lady aged seventeen years, producing subsequently difficult parturition.

Mr. Coulson suggested that death was due to pyæmia in the case of Mr. Holmes.

IMPACTION OF A PIECE OF MEAT IN THE LARYNX CAUSING DEATH.

Dr. Andrew showed a larynx with a piece of meat impacted tightly in it, producing suffocation. It occurred in the case of an insane female patient; death was almost instantaneous, and took place before assistance could be obtained. In the same body, there was a calculus in the ureter, and several gall-stones in the ducts and gall-bladder.

HYDATID TUMOUR IN CONNEXION WITH THE URINARY BLADDER.

Dr. Habershon showed a preparation from a patient who suffered from chronic disease of the stomach. The patient had a large mass in the region just above the bladder, which was supposed to be distended bladder, but which was not diminished by the catheter. After death from cancer of the stomach, a large hydatid tumour containing three pints of hydatids was found connected with the upper part of the urinary bladder.

Mr. Henry Thompson said that these cases were rare, although recognised as occasionally occurring. He had collected five cases, and had recently seen a sixth, in which puncture for retention by the rectum evacuated a large quantity of hydatids. The patient, who was a boy, made a good recovery. Usually, the hydatid sac was situated between the prostate or base of the bladder and the rectum.

CALCULI OF THE BLADDER.

Mr. Fergusson exhibited some calculi from two patients, removed by lithotomy, in which the form was rather remarkable, observing that we know very little of the causes which operate to produce some of the varieties of form met with. One was flat and disc-shaped; the others were extremely irregular.

TUMOUR FROM THE MAMMA.

Mr. Fergusson showed this as a large specimen of the fibrous tumour of the mamma. It weighed between three and four pounds, and had been fifteen years in developing. Some of the original tissue of the breast was still to be detected.

ATROPHIED BONE.

Mr. Partridge exhibited specimens of wasted bone: a tibia from a bed-ridden patient, which was remarkably atrophied, and weighed only 685 grains (a healthy one, of moderate size, would weigh 1750 grains); a rib in similar condition accompanied it.

EXOSTOSIS.

Mr. Partridge showed a specimen of exostosis, very large, from the upper part of the thigh-bone, just below the trochanters.

Mr. Wood thought that fracture in elderly people, especially of the neck of the thigh-bone, depended on thinning of the bony tissue and its replacement by fat through a species of fatty degeneration.

Dr. Gibb exhibited the following specimens:

I.—CALCIFICATION OF THE ARTERIES, WITH ABNORMAL DISTRIBUTION OF THEIR TRUNKS,

taken from a man, aged sixty, in whom the calcareo-atheromatous expression was well-marked, and who died of disease of the lungs. The heart was soft, and in a state of fatty degeneration; the arch of the aorta was much dilated, its interior being lined with large atheromatous patches, many being converted apparently into true bone. It gave off four branches, instead of the usual three. The thoracic and abdominal aorta were also lined by atheromatous patches, and those in the latter were in a state of calcification. All the arteries of the upper and lower extremities were in a state of firm calcification. This condition was absent in those of the neck, but affected the coronary arteries and the smaller branches at the base of the brain. There was an abnormal division of both femoral arteries—that on the right side divided into two branches at Poupart's ligament, whilst that on the left divided into three. The great ischiatic nerve on the left side divided into two branches on its emergence from the great ischiatic notch; that on the right was normal. A large vomica existed near the apex of the right lung, and both lungs contained miliary tubercles. The cartilages of the larynx were calcified. The parietal surfaces of the abdominal viscera were adherent to one another. The greater part of the compact substance of the bones had become absorbed.

II.—RADIAL AND ULNAR ARTERIES CALCIFIED,

taken from a man, aged sixty-five, who had died from chronic bronchitis. The heart, although enlarged, was not diseased. The coronary arteries and the more minute arteries of the brain were affected with atheromatous ulcerations. The axillary arteries downwards in both arms, and the femoral arteries downwards in both legs, were hard, unyielding cylinders from extensive deposits of calcified matter. The lungs were emphysematous, the bronchi chronically diseased. and a few tubercles were scattered throughout the former. The liver and spleen were enlarged, and adherent to the diaphragm.

III.—RADIAL ARTERY CALCIFIED.

from a female, aged forty-five. The heart was comparatively healthy, but with the coronary arteries calcified. All the arteries of the extremities were calcified, more especially manifest in the forearms and legs. The patient in this case and in that of No. 2 had the calcareous expression simply.

IV.—THE PERICARDIUM DRIED, WITH BONY PLATES AND ATHEROMATOUS PATCHES,

from a man, forty-six years of age, who had the atheromatous expression perfectly marked, although otherwise apparently in good health. He died suddenly from cerebral hæmorrhage, which was found to have proceeded from a small vessel affected with atheroma. The heart was enlarged and very fatty; the arch of the aorta, with the thoracic and abdominal portions, were much affected with atheromatous ulcerations, containing a quantity of fat and cholesterine. The cartilages of the larynx were in a similar condition, mixed with soft, calcified material. The pericardium, although so extensively affected with atheromatous and bony deposits, gave no uneasiness to the patient during life.

V.—A DRAWING OF ATHEROMATOUS DISEASE OF THE VESSELS AT THE BASE OF THE BRAIN,

in an instance of what Dr. Glibb considered a typical example of the atheromatous expression. The interior of the body was a mass of fat, atheroma, oil, and cholesterine, although the patient was not corpulent. His age was sixty-three years. Death occurred from serous apoplexy. The heart was covered with fat; the left ventricle hypertrophied and dilated; the aortic valves much calcified; the aorta was lined with ulcerated patches of atheroma, one of which, as large as a shilling, was of the consistence of bone. The abdominal viscera were imbedded in fat, the liver was enlarged and loaded with fatty elements, and the subcutaneous fat over the abdomen was an inch and a half thick.

Dr. John Ogle exhibited specimens from three different cases of

ELEPHANTIASIS ARABUM.

These consisted of portions of integument and of muscle. The surface of the skin was of a very dark Indian-ink color, whilst the subcutaneous tissue was of an opaque white color, of exceeding thickness, and so firm and tough as to be comparable with a portion of leather. On microscopical examination, scarcely any of the constituents of true skin could be discerned. The pigment was very dark and plentiful. The consistence and thickness of the subcutaneous tissues were owing to the infiltration of a quantity of albumino-fibrinous material, and presented abundance of granular amorphous material, containing numbers of fibres and occasional corpuscular elements. The portion of muscle showed the natural striæ of voluntary muscle in abundance everywhere; but the areolar tissue amidst the various bundles of muscular fibres was very unusually plentiful and tenacious. The specimens were sent over from Cochin, in Madras, to Dr. Ogle by his friend, Mr. F. Day, civil surgeon at that place. In two of the cases amputation had been performed, and in the third the patient had died of dropsy following a malarious fever. It appears that in Cochin about 1 in 17 of the native Christians are affected by elephantiasis of the limbs (not of the scrotum), and of the Portuguese about 1 in every 18. Mr. Day is engaged in investigating the pathology and treatment of this form of disease, and also the relationship between the elphantiasis Arabum and the E. Græcorum. Dr. Ogle suggested that it would be very desirable to examine the state of the blood, the bloodvessels, and various viscera in post-mortem examinations of these cases, in order to see if any comparison could be established between this disease and those various conditions met with in England, in which, from excess of fibrine, a greater aptitude to precipitative deposits of this substance, in the form of masses or infiltrations, is met with in the body.

Dr. Ogle also exhibited four specimens of

SPINA BIFIDA.

Of these, three had been forwarded by his friend, Mr. Ewens, of Milton Abbas.

Case 1 showed extensive sloughing of the surface of the cyst, which was full of half-coagulated, but soft and spongy, fibrinous material, filling up the interstices between the various nerves passing across it. In this case there was deficiency of ossification in the two last dorsal and the uppermost lumbar vertebræ, and the various nerves emerged from an opening, in a single bundle, into the sac, and in a very softened state passed to the wall of the sac. The specimen was from a boy, aged fifteen months, who, up to two days before death had been comparatively in good health, the tumour having been several times punctured with temporary benefit. Sloughing of the sac and convulsions came on before death. The mother had been subject to fits of some kind when a child, and her sister had given birth to a child with malformation of the fingers.

Case 2 presented deficiency of the laminæ of the two upper sacral vertebræ, the cyst communicating with the spinal canal by a centrally-placed opening of the size of a shilling, through which a large bundle of nerves passed across the sac to its outermost part. The specimen was from a female child, born dead (a breech presentation). In this case the latter stages of labour were lingering, and the child appeared to have died from pressure upon the unbilical cord. There was talipes varus of the right leg, and the bones of the head were very loose and fluctuating but the measurements of its various parts were not much greater than usual. The mother was very strumous, with a large head, and had had several miscarriages. One child had died with convulsions after whooping-cough, and the remaining child was hydrocephalic. Three of her children lost children by convulsions.

Case 3 exhibited a very unusual projection or curvature backwards of the spine at the part which corresponded with the sac itself. The sac showed that considerable adhesion had existed between the spinal membranes; the various posterior nerves observing their lateral direction from their first entrance into the sac, passing to the posterior part of the sac's walls. The excessive projection was evidently caused by projection of the bodies of the vertebræ at the part where the laminæ were defective; but, to a certain extent, it diminished on pressure after the various strong muscles at the inner part of the lumbar or pelvic region were divided. On sawing through the spine longitudinally, the projection was found to be owing to a "considerable absence of the anterior part of the body" of one of the vertebræ, so that the two adjoining ones were all but brought into contact with each other at their anterior parts, pushing back, as it were, the intervening deficient vertebræ. The diminution of the projection on dividing the psoas muscles appeared to indicate that it was by an excessive muscular action, approximating the upper part of the lumbar to the sacral region, that the body of the vertebræ arrested in growth had been displaced backwards, the unwonted muscular action being doubtless occasioned by some irritation of the spinal cord or nerves at the seat of malformation. The mother had had symptoms of abortion at an early period of pregnancy, and the case was one of breech presentation. Moreover, it was accompanied by talipes varus in both feet, and by a hydrocephalic state of the skull.

Case 4 was one in which the laminæ of all the lumbar, most of the sacral, and one or two of the dorsal vertebræ were defective. In this case, the nerves, in passing through the sac to its posterior walls, observed their lateral position throughout. No particular history existed.

DISEASE OF THE TARSUS.

Mr. Holmes produced a preparation to illustrate the amount of repair resulting after the removal of two of the bones of the foot—namely, the cuboid and external cuneiform—by Mr. A. Johnson, in December last. More recently the foot was amputated for other disease, but the two bones in question had been replaced by a firm cicatrix of fibrous tissue.

Mr. Holmes also showed a specimen of

MALIGNANT DISEASE OF THE FEMUR PRODUCING FRACTURE.

The patient had also a tumour in the breast, which had existed thirty-two years, and which was cancerous also. Fracture took place in the ribs subsequently. Notwithstanding the condition of the patient, very considerable efforts at repair in the femur were made during the five months only which she survived the fracture. She died of exhaustion.

THE ARTICULAR LAMELLA OF BONE.

Mr. Hulke exhibited specimens of the articular lamella of bone in consequence of the discussion of the subject which had recently taken place in this Society. Mr. Barwell had described a tubular structure in the lamella, which Mr. Hulke and other observers still fail to find. This lamella varies extremely in thickness—e. g., from 1-28th of an inch to 1-4300ths. The question was referred to the committee appointed to consider that subject.

CASTS FROM THE BRONCHIAL TUBES.

Dr. Hyde Salter showed numerous specimens of these casts expectorated by a man under his care at Charing-cross Hospital. He was a stout, healthy person, thirty-three years old, who had been well up to nine months before he was seen; during that period he had a paroxysmal dry cough, with soreness; a mass would be expectorated, giving great relief. The only physical sign during life was one spot, very small in size, which gave constantly a fine crepitation, like that of pneumonia. He spat up, during two years, about two or three casts a week. but he never had hæmoptysis. He was much improved by tonics.

MILK FROM THE AXILLA.

Dr. Hare showed a specimen of human milk which exuded from an opening in the axilla of a female; it was considered that it was not improbable that a supplementary portion of mammary gland tissue existed there which supplied the secretion exhibited.

EXCISION OF KNEE-JOINT.

Mr. Maunder showed portions of diseased bone removed by excision from the knee-joint. There was a small amount of motion in the false joint resulting, and the condition was extremely favorable.

DISEASED SUPRA-RENAL CAPSULE.

Dr. Wilks detailed a case of this disease, with marked discoloration of the skin. The disease of the capsule was a fibro-albuminous deposit, such as is ordinarily found in Addison's disease.

EXTRA-UTERINE PREGNANCY.

Mr. Adams showed a case of Fallopian tube pregnancy, extremely perfect, in the fourth or fifth month of a first pregnancy, in a woman aged twenty-three, who died eleven hours after symptoms of pain in the abdomen had set in, death evidently occurring from internal hæmorrhage.

RUPTURE OF THE THYRO-HYOID LIGAMENTS.

Dr. Stallard exhibited a specimen of this lesion, stated to have resulted from violent cough.

HYDATIDS OF THE ABDOMEN.

Dr. Ogle showed drawings of cases in which, by rupture of hydatid cysts, these bodies had been thrown into the abdominal cavity.

Editorial.

THE STATE OF THE BLIND IN IRELAND.

Few afflictions more to be deplored can befall an otherwise healthy man or woman than *total blindness.* The intellectual person is at once cut off from all those aids to mental vigor and enjoyment in which he revelled before; and he who has to depend for his daily bread upon his physical powers and the perfection of his senses, is reduced to a worse condition than if he had to begin life anew. Both may, it is true, after a peculiar tuition and a lengthened period, find that there yet exist methods by which they may read and write on the one hand, and follow a trade, on the other; and a few may even astonish their fellow-creatures by what they can perform in the domains both of mind and matter. Nevertheless, with all the advantages which modern ingenuity and philanthrophy have perfected in order to give "eyes to the blind," they cannot fail, we fear, of too often accompanying their blessings with the frequent tendency to throw their recipients into that deplorable state of feeling which the well-known lines of Dante so truthfully depict:—

> "Nessun maggior dolore
> Che ricordarsi del tempo felice
> Nella miseria."

Ireland has from a very early time, it would appear, always presented a large number of blind. It has been emphatically termed the land of the "dark man." Giraldus Cambrensis speaks of having met more blind persons there than in any other land; and the writings of the ancient "Medici" of Ireland, still preserved in the Gaelic tongue, containing as they do disquisitions upon diseases of the visual organs, prove how long back these affections were endemic in that country. Since those early periods the "Green Isle" has continued to furnish a large contingent of the maladies in question. In recent times we have witnessed this in addition—viz., that independent of the general ophthalmic affections, the effects of the famine in 1846, '47, '48, greatly augmented the number of sufferers from these diseases, and which latter have since prevailed more severely in those districts which most suffered from that terrible visitation. Weakened constitutions, and a change from a fresh vegetable diet to one from which the latter was nearly excluded, thus operated as causes for that epidemic ophthalmia which prevailed, particularly in work houses, from 1846 to 1852. We are told that there are now fully 6000 persons totally blind in Ireland besides a large number suffering from the loss of one eye or generally-impaired vision, a majority of whom are practically blind, so far as sight is required for the purpose of earning a sufficient and steady subsistence.

The report on the Status of Diseases, contained in the census returns of 1853, proves the sad fact that diseases of the eye and total blindness exist in Ireland to a much greater extent than in any other country in Europe—except *Norway.* A few years ago, when the census was taken, there existed one blind person in 864 of the inhabitants of Ireland whilst in Norway, according to the returns made in 1845, the proportion was one blind to 482 persons. On the other hand, in the Swiss Cantons and Sardinia, there was only one blind in every 1500 inhabitants.

The more ostensible causes of this high rate of blindness in Ireland other than those we have just hinted at, appear to be the extreme moisture and variability of the climate at one period of the year, and the harshness and duration of east winds at another; the extreme poverty of certain classes of the population, and the prevalence of the strumous and rheumatic diatheses. In 1858, the blind inmates of workhouses alone amount to 1065; all of whom, we are informed, were, with very few exceptions, utterly unable, from want of instruction, to render themselves useful, and consequently required extra care. It is due to Mr. Wilde to state, that the attention of Government was first called by him to the want of suitable provision for the blind in our much-afflicted sister island. In a memorial to the Lord Lieutenant, he dwelt upon the fact, that while the lunatic, and idiotic, the temporarily sick, and the criminal have been all amply provided for, no general public asylum for the pauper blind as yet existed in Ireland, nor any institution where they could be afforded the means of contributing to their own support so as to eventually relieve the country of some of that taxation which, whether voluntarily or compulsorily, is at present levied for their support.

This great want of adequate provision for treatment of diseases of the eye, as well as for improving the condition of the poorer classes in Ireland afflicted with total blindness, induced Mr. Blake, the member for Waterford, to give notice in the House some time since of his intention to move for the appointment of a Select Committee to inquire into and report upon the subject. The Chief Secretary for Ireland having, however, stated that he intended introducing a Poor-law Amendment Bill, which would contain clauses meant to benefit the blind, Mr. Blake postponed doing anything further until he saw whether the proposed measure met the requirement in question. The measure alluded to having been analyzed by Mr. Blake, he now comes forward,[*] and states that, in his opinion, it falls short in two important respects. He points out, in the first place that no provision whatever is made for affording better curative treatment for indigent persons suffering from diseases of the eye; and in the second, that the clause giving boards of guardians increased power with respect to sending the blind to institutions for literary and industrial instruction, is far too limited. Such being the case, as it appears to Mr. Blake, and the latter being yet assured of the desire felt by the "Chief Secretary" to use the influence with which his abilities and high official position invest him for the advantage of the poorer classes in Ireland, the philanthropic member for Waterford, we are glad to say, continues his exertions, one result being the publication of the pamphlet now before us. In this Dr. Blake lays a brief statement before the Right Hon. Edward Cardwell, of the several disadvantages under which the blind Irish poor labor. He successfully, in our opinion, makes out a case for inducing the "Chief Secretary" to institute such modifications in the Bill as will render its operation more extensive and useful in the direction he himself has so ably pointed out. There are two points necessary to be considered: first, that of alleviating the condition of those deprived of sight; and secondly, that of adopting measures for preventing blindness. As this calamity is rather on the increase in Ireland, as it admits to a great extent of a remedy, and as this remedy possesses the recommendation of being considerably less extensive to the ratepayers than the charge they would become subject to for the support of those who, for the want of timely curative treatment, would necessarily prove a burden on the industry of others, we hope to find the useful endeavors of Mr. Blake become realized to the fullest possible extent.

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[*] State of the Poor Laboring under Diseases of the Eye and Total Blindness in Ireland, with Suggestions for Ameliorating their Condition. By John A. Blake, M.P. pp. 22. Waterford. 1860.

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SALE OF THE SITES OF SUPERFLUOUS CHURCHES.

UNDER the title of the Union of Benefices Bill, a measure is proceeding through the House of Lords, which may be very beneficial to the clergy, but very much the reverse to sundry crowded populations. The plea urged in favor of this Bill is no doubt founded on facts. Thus, within an area of the City of London, one mile long by half a mile wide, there stand no less than fifty-eight churches. In vain do the bells of many of these sacred edifices summon the faithful. Not only are there but few faithful ones living within hearing, but few also are the unfaithful to claim the ministrations of religion. It is well known that of the countless multitudes which throng the City during the six days that are devoted to the worship of Mammon, only a small proportion sleep within the unholy boundary. The fifty-eight steeples and the fifty-eight bells seem to proclaim the hypocrisy of the place. The Royal Exchange is certainly a more fitting temple to the *genius loci.* The City is evidently utilitarian. It wants to clear away those superfluous churches; they cumber the ground. How much more useful and how much more congenial to the commercial mind, would be the magnificent warehouses and offices that might be erected if those churches were not in the way. That is one phase of the argument for demolition. There is another. The City is not, as some malicious people suppose, altogether neglectful of religious duties. It is very anxious to go to church in the suburbs and in the country, where the free air of heaven hebdomadally invites it to purify itself from those moral and physical contaminations which are contracted under the shadow of the Bank. In short, the churches are not in the right place. Now, the City thinks, and the City clergy think, that the deserted churches thickly clustered within the sound of Bow-bells ought to be moved into the suburbs. Not, of course, the stone, the bricks and mortar, and the timber, which compose the sacred structures, but the money which the sites on which they are piled will fetch. This money would build comfortable new churches, and go far to endow comfortable livings in more pleasant localities, where worshipers abound; and it is not anticipated that these worshipers would be the less devout because the opportunity of devotion was brought so conveniently to their suburban doors at other people's cost.

Mr. Hume, the Rector of St. Michael, Wood-street, who is very properly anxious to follow his flock into pastures new, indicates by means of a map about thirty churches, including his own, that call for demolition. He has obtained the opinions of architects and builders, which prove that the value of the site of each church would generally exceed the expense of removal and rebuilding. Indeed, we are assured —and there is no reason to question the statement— that "large offers have been made for some of the sites by a gentlemen who is to a great extent concerned with building proceedings in the city." Mr. Hume, therefore, unhesitatingly states that "there is not one of the sites pointed out in his plan which would not sell for a sum which would build a church and parsonage-house somewhere else. In many instances the sum obtained for one site would be sufficent to build two churches and parsonages, and in some to build three." The prospect is irresistibly tempting; and we cannot deny that the case as put by the City and the clergy is a strong one. Here are churches without congregations, occupying ground that merchants could turn to better account; there are suburban and rural districts scantily provided with church room. Oscillating between the two, but casting a wistful look towards the new parsonage-houses, are a number of excellent clergymen, now condemned (many for far too narrow stipends) to that most dreary lot—one which a medical professor without pupils may appreciate—of delivering eloquent discourses that would be profitable and edifying if they could but be heard by a sufficient number of individuals to deserve to be designated by a noun of multitude.

But there is another side of the question. Unfortunately it has not the weight of influenee and pecuniary advantages. On the contrary, it calls for a considerable sacrifice of money. There are many persons who, in the interest of others, as well as from their own necessity, are compelled to live in the City. These persons, the white slaves of commerce, want air and sunlight wherewith to maintain that amount of health which will enable them to earn their bread and do the work of their employers. They eminently deserve consideration. But not they alone are concerned. The tens of thousands who in the week-days have to spend many hours in crowded warehouses, in dark and confined offices, are deeply interested. Any one familiar with the city knows that, owing to the fabulous value of land, and the spacious structures required by the constantly increasing development of commerce, there has of late years grown up a style of building on a stupendous scale. Those who are fortunate enough to possess a few square feet of soil in "an eligible situation" are eager to stretch to the utmost practical limits those rights which extend to the centre of the earth in one direction, and into the sky in the other. The earth is excavated for cellarage; the sky is invaded by floor upon floor, until the streets and other interspaces are converted into deep wells and crevasses, where no gleam of sunshine can pierce, nor living air can circulate. The goad of private greed is hard to control. The evil that attends the right of individuals to make the most of their property can only be counteracted by a careful and just administration of public property. And, surely, the edifice and the soil that have been solemnly dedicated for ever to the service of God and the spiritual welfare of the people may be justly called public property. Certainly it was never contemplated that the sites should be sold for the benefit of incumbents. The necessity for an Act of Parliament, indeed, sufficiently attests the absence of all legal right. But, says the utilitarians, it is eminently desirable that we should have this right. Upon this we join issue. It is not desirable. Nothing is more simple, and nothing more just, than that the citizens who use the city to no small profit in the week-days should build the churches they yearn for at their own expense. It is well known that it is not a very difficult matter to raise a church in a growing suburban district. The freeholder and the builder thoroughly understand the value of a church in improving the neighborhood. Subscriptions in aid are raised. An income from pew-rents may certainly be looked for. There is no necessity for selling the air and sunshine, which are the very staple of life of the poor pent-up cockneys. This proceeding is not only unjust, but it is extremely dangerous. Dr. Letheby, in his capacity of Medical Officer of Health, has pointedly and earnestly contended, on sanitary grounds, against the perpetration of this most sordid job. Under the churches, as well as in the churchyards, there lie rotting thousands of corpses. We do not stop to urge the indecency of people selling the bones of their own or other persons' ancestors. We think it useless to talk of the desecration of spots thought to be hallowed as the resting-places of the dead. Nor do we insist that this substitution of warehouses for churches is a barbarous obliteration of an interesting page of topographical and social history. The promoters of the scheme have no foolish prejudices of this kind to appeal to. We will only insist upon the great and absolute danger of disturbing a soil the chief constituent of which is decomposing animal matter. No application of disinfectants can render this a safe proceeding. Nor is the next step—that of occupying the houses to be built upon the sites—a safe one. The process by which human flesh is resolved into the simpler elements is a slow and a perilous one. For years and years a secret distillation of subtle poisons will go on, which will find their way through the pores of flag-stones, through unheeded chinks, and, perhaps, one day will light up a deadly fever in the cold blood of the rich merchant who had not thought it worth while to ask his representatives in Parliament to lift their voices against the unhallowed Act that legalized the sale of the dead to sacrifice the health of the living.

Let us hope that Parliament will eventually adopt the amendment brought forward by the Earls Powis and Malmesbury, the effect of which would be to make it unlawful to sell the site of a church in cases where interments had taken place. By all means let useless churches be pulled down. But let the spaces they covered be still preserved for the public good. As breathing-places—as spots where the summer sun at other times than at the brief moments of his meridian height can shoot his regenerating rays these vacant spaces would be of priceless value. Once gone, they will never be recovered. Let not the accursed hunger for gold be suffered to devour that property which, first designed to minister to the moral welfare of the community, may, that purpose failing, most fitly be consecrated to the preservation of its physical health.

MARINE SANITARIA AND TRANSPORT SERVICE.

To everybody, except some nervous and delicate females and a few males with very susceptible and untameable stomachs, a moderate sea voyage is one of the finest tonics known. The rapid movement through the atmosphere, the change from latitude to latitude, the constant breathing of a pure undefiled air, the complete relaxation of mind and muscle, the novelties of sea-life and nautical manœuvring, soon begin to work wonders upon body and mind. The complexion becomes clear, the eye bright, muscular movement easy, quick, and vigorous, and the appetite keenly sharpened. The nervous, worn-out, exhausted, irritable person finally becomes fat, lazy, and *insouciant*. For the victim of commerce, the votary of fashion, and the devotee of literature and science, we say there is nothing like a sea voyage to bring about that necessary and perfect "moulting process," as Schulz calls it, which eventuates in an almost rejuvenescence. But there is another class of sufferers, besides those we have named, to whom a marine life, for a time, is a great blessing. This is made up of such as have been obliged to spend several years of their life in a hot, tropical, or malarious country. Reduced by remittent or jungle fever; worn-out and worried by recurring hepatic, splenic, or intestinal affections; unstrung by climate, exhausted by excesses—a trip to the Cape and back, to Australia, a cruise even in the Bay of Bengal, or on the Red Sea, in the Adriatic or Mediterranean, will often produce almost marvellous results. Now, as Government has lately taken advantage of the beneficial influence which altitude has in reinvigorating the broken-down constitution of the soldier upon the plains of India, by establishing those hill sanitaria to which we have more than once drawn attention, why should it not proceed a step further, and try a Marine Sanitarium—say, at first, for Bengal?

This suggestion is based upon a perusal of some notes made by Staff-Surgeon Kirwan,* on a recent trip in charge of medical invalids, moving by water from an up country station to Calcutta. He tells us that the residents of Calcutta frequently avail themselves of a temporary stay on board the steam-tugs and pilot-ships of the river Hoogly. They find they reap great advantage from such a change, and consider it cheaply bought at the price of twenty rupees a day; and no doubt it is far from an unpleasant medicine for the restoration of health. Mr. Kirwan proposes to try some such method with our Indian troops, suggesting that the result and value of the plan might be tested in a practical and expeditious manner, by putting some of the sick on board the Hoogly vessels, so wisely patronized by such as are their own masters, and prudent enough to adopt the practice. As far as feasible, the Government pilot-ships, properly fitted up, might be employed as floating sea-barracks, to which invalids could be conveyed by the numerous unemployed dooleys and river steamers. Mr. Kirwan's idea is, hygienically or medically viewed, unimpeachable; how far it is financially and otherwise practicable, it would be as yet premature to decide. His grand project is to establish a Marine Sanitarium at Calpee, composed of a fleet of first-class troop-ships. His proposition is based upon the belief that the timely enjoyment of sea air in trips to Penang, Port Blair, Ceylon, or other advisable ports, would so thoroughly restore the health of many soldiers as to obviate the necessity for a longer voyage. Their service would hence be preserved to the State during the time now lost under the present system in visits to England. It receives further support, too, when we consider that the length of time unavoidably occupied in the chartering and fitting of ships, and in making other suitable arrangements for the conveyance to England of a number of invalids, unfortunately renders impossible the removal of some who need it most, and deprives many others of the increased benefit which the change would afford them if it took place at an earlier stage of their disease. The expedient under consideration would relieve invalids from the necessity of waiting, perhaps, six months, before they can inhale the sea air, pronounced essential for the recovery of their health, and would thus prove a simple means of reducing the mortality of European troops serving in India. Any expense attending the organization indicated, would, therefore, be compensated by the benefits derived from it. Should, however, the saving effected in the passage-money of invalids requiring but a short trip to sea, and the value of lives now often lost in "waiting for the order" for removal, not be deemed sufficient reasons for establishing a fleet of troop-ships, we may urge the use to which Mr. Kirwan shows such vessels could be applied—viz., in relieving regiments at periods shorter than hitherto. We quite agree with this painstaking officer, that it is a question worth solving, whether the value of the lives that would be saved by frequent trips, and by the beneficial effect which the knowledge of such frequency would have on the minds and constitutions of the soldiers, would not counterbalance the expense of a fleet of sea-barracks, useful at all times as hospital and troop ships. The despatch of troops to India and to our various possessions is now so certain to take place regularly, that to continue advertising for troop-ships, fitting them up, and, after a temporary but costly use, abandoning them, appears as anomalous as it would be continually to hire furnished land-barracks, and relinquish them after brief occupation.

Still there is no saying how this view of the matter may square with the principles which, in the opinion of the Administration, should regulate Indian financial economy. These principles are evidently peculiar. In the annual accounts of India, *e. g.*, two highly-suggestive items are to be found: one is, "Passage and outfit for a governor, a member of council, staff officers, &c., £11,540;" the other, "For cultivation and manufacture of vegetable products in India, £45." A gleam of light, however, has lately pierced the gloom. Last Tuesday week Mr. Lindsay moved, in the House of Commons, for a Select Committee "to inquire into the organization and management of those branches of the Admiralty, War-office, India-office, and Emigration Board, by which the business of transporting, by means of shipping, troops, convicts, emigrants, materials for war, stores, and any other similar services, were now performed with a view of adopting some uniform system, under one consolidated and responsible department."

But there are other reasons than those merely of an economic and medical character to be urged in favor of permanent sea accommodations for troops. We would, therefore, briefly observe, that the growing interests of England in the East may, at any moment, give rise to emergencies, calling imperatively for a rapid concentration of troops, and at such a crisis the delay attending a deficiency of sea carriage might result in national disaster. Finally, the startling rapidity of recent events show that operations in India, China, the Cape, Persia, Egypt, or amongst nations even more westerly than the latter, will be materially influenced by the knowledge, that England could not be surprised in the situation of having her troops and troop-ships sixteen thousand miles apart from each other.

DYING DECLARATIONS.

The practice of the law relating to the admission in evidence of the declarations of dying persons has a special interest for medical practitioners. We need not do more than advert to the numerous cases of death by violence or poison in which justice would be frustrated were not dying declarations admissible. In such cases medical practitioners are liable to be called upon to give evidence. It will frequently happen that a medical opinion must determine the circumstances under which a declaration coming under this description should be taken. It should be borne in mind that the law is justly jealous of any departure from the ordinary rules of evidence. The admission of dying declarations is held to be a marked departure, only to be justified by grave and exceptional conditions. The Lord Chief Baron Pollock has recently declared "that the admissibility of such evidence at all is an anomaly and an exception to the general rule and law of England, and it ought not to be extended." It may be stated that the two main securities for the truthfulness of evidence are—first, the solemnity of the oath taken by witnesses in courts of law, and the liability to prosecution for perjury if they be found to swear falsely; and, secondly, the subjection to cross-examination. In the case of dying declarations the latter security is altogether wanting, and a very serious defect it is. Those who have had much experience in courts of law will know that a skilful cross-examination is frequently of striking use in eliciting the truth and correcting error in the case even of a conscientious witness; and all must place the highest value upon this ordeal as a check upon the utterer of false testimony. In regard to the first test, also,—the oath,—it must be remembered that it is only on the hypothesis that a person feeling himself to be dying, and that he is on the point of answering for the truth of his statement before a higher than earthly tribunals, is assumed to be in a position equivalent to that of taking an oath. Viewing human nature as we find it, there can be no doubt that a declaration made under such circumstances is, as a rule, at least of equal value with that of an ordinary statement on oath. But men have been known to die with false accusations against others upon their lips; and it is therefore obvious that the jealousy with which the law regards this kind of evidence is justified.

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* Suddenly ordered to China.

Acting in this spirit, the admissibility of dying declarations has been considerably restricted within recent times. In Lord Mansfield's time, a century ago, it was held that "any declaration *in extremis* was admissible on the ground that the solemnity of the occasion was equivalent to a declaration on oath." The opinion that this rule still holds its full application is prevalent with the public. But the rule, as we shall see, has been considerably restricted. In the recent case of Regina *v.* Hind, the question was distinctly brought forward. The prisoner was tried for feloniously using certain instruments upon the person of a woman with intent to procure her miscarriage; and on the trial, a statement made by the woman when dying was offered in evidence. It was objected to on the part of the prisoner, but was admitted by the judge. The prisoner was convicted, and the point was reserved. The objection taken was that, although a dying declaration might be admissible under certain circumstances, the rule was not applicable in the present case. It was argued that the subject-matter of the inquiry was not principally the death of the deceased, but something collateral—that is, the declaration of the victim went to prove that the prisoner used instruments for the purpose of procuring abortion, and her death was not the subject of inquiry before the Court.

The Lord Chief Baron Pollock confirmed the correctness of this argument. He ruled that the dying declaration of the woman was improperly admitted in evidence, and the conviction was quashed. The rule to which he adhered was that laid down by Chief-Justice Abbott in Mead's case, where he said that "evidence of this description is only admissible where the death of the deceased is the subject of the charge, and the circumstances of the death form the subject of the dying declaration."

The practical teaching of this case as regards our profession is, to take care, first, that the person making a "declaration" shall believe himself to be in a dying state; and, then, that the circumstances causing the death are the subject of the dying declaration. It remains for the lawyers, subsequently, to see that the death of the deceased is the subject of the charge upon which the declaration is tendered in evidence.

IMPROVEMENT IN THE PUBLIC SERVICES.

The authorities of the Horse Guards have decided that the whole of the infantry reinforcements under orders to proceed to India shall be furnished, previous to embarkation, with a light-drab suit of clothing, fit for wear in the East. The suit decided upon consists of a very loose tunic or blouse, and trowsers to match, the name applied to it being the "Khaki suit," and by which it is already known. Each man is also to be furnished with a flannel "cholera belt" for use in India. Colonel Daubeny, Inspector-General of Army Clothing, too, has been to Paris to see how army clothing is made in France. In one establishment he found that 30,000 pairs of machine-made boots could be turned out every month. By a minute subdivision of sizes, every recruit in the French army can be properly and at once fitted with shoes. But whilst the French make 24 sizes of boots for their soldiers, we make but three. To one of these three sizes every English recruit must adapt his feet! No doubt there must occur as admirable adaptations in respect to shoe leather in England as there do in respect to mattresses in the East Indies. In the latter the amount of superficial space allowed to each European soldier whilst in the Government river boats employed there for the conveyance of troops is six feet by two feet, whilst the mattresses supplied to the men and invalids, especially whilst in these boats are two feet eight inches in breadth by six feet four inches in length! What wondrous ingenuity must be exercised!

Hospital for Consumption.—At the annual Court of Governors, held this week, the report stated that during the last year 972 patients had been admitted, being the increase of 300 over the previous year; 688 patients had been dismissed, many greatly benefited: 124 had died. As so many deaths had occurred during a short period, it was necessary that the governors should exercise some caution in the selection of patients for admission. The number of out-patients in 1859 was 4649 against 3971 in 1858. The general income amounted to £11,985 3*s.* 6*d.* Balence in hand, £642 5*s.* 10*d.*

Medical Annotations.

"Ne quid nimis."

THE CONFESSIONS OF AN ARSENIC-EATER.

The practice of arsenic-eating has of late years been the subject of much debate. It has been asserted to exist on the largest scale, chiefly in the Tyrol and Upper Styria, and to lurk in the northern counties of England. It has been denied and reasserted; the last authoritative dictum on the subject was decidedly negative. The question is now reopened by Mr. Heisch, Lecturer on Chemistry at Middlesex Hospital Medical School, who adduces evidence of the weightiest character in affirmation of the practice. Mr. Heisch derives his information from eminent physicians of Salzburg, and lecturers and professors residing in Styria, with whom he is personally acquainted. If personal testimony be of any worth, the existence of arsenic-eaters can no longer be doubted. Dr. Lorenz, the Imperial Professor of Natural History, writes that he is aware of the practice; that it is difficult to get hold of cases, because a law exists which prohibits the retail of arsenic without certificate; and since the arsenic-eaters thus procure it contrary to law, they conceal the fact, especially from priests and medical men. But it is within his knowledge that arsenic is commonly taken by peasants in Styria, the Tyrol, and Salz-Kammergut, especially by huntsmen and woodcutters. They believe that it inures them to fatigue and improves the wind.

Mr. Lorenz placed Mr. Heisch in communication with one gentleman, the director of arsenic works near Salzburg, who could supply from his personal experience the confessions of an arsenic-eater. Of the details forwarded Dr. Lorenz guaranteed the authenticity, so far as they could be within his own knowledge. Moreover, this gentleman occupies an official position, and there is every collateral reason for putting faith in his statements. He writes to Mr. Heisch, that when he first undertook his labors in connexion with the arsenic works, he was directed by Professor Bönsch, Lecturer on Chemistry at Eisleben, to adopt certain precautions intended to enable him to withstand the fumes. These included a total abstinence from spirits, and a course of arsenic-eating. The arsenic was directed to be taken in gradually increasing doses until he arrived at the age of fifty, when they should as gradually be diminished; one dose to be taken daily in warm coffee. He forwards to Mr. Heisch two small packets as material illustrations of this statement, marked respectively Dose No. 1 and Dose No. 2. Dose No. 1 represents that quantity which he first began by taking, and consists of about three grains of coarse, but pure, powdered, white arsenic. Dose No. 2 consists of twenty-three grains of the same deadly poison, enough to kill at least twelve ordinary individuals.

We are particularly struck here with the largeness of the first dose, which is itself a poisonous one; and it is difficult to understand how doses so considerable should be repeated at the first without inducing symptoms of chronic poisoning. The confessions of this gentleman go on to describe the effects of attempts made to leave off the practice. After some few years he made two attempts to desist; he quickly suffered from faintness, palpitation, intense depression of spirits, total incapacity for exertion, loss of sleep, and finally a severe inflammation of the lungs, which threatened to be fatal; and he is persuaded that he only saved himself from death by resuming the arsenic. It is remarkable that these sufferings during the withdrawal of the poison are not compensated by any pleasures during its consumption, such as those which tempt the opium-eater to his inevitable doom.

This statement, confirmed as it is by Dr. Lorenz and made under circumstances which admit of its verification, is opposed in many important respects to the statements made *ex cathedrâ* by Dr. Taylor in the last edition of his book on Poisons. Similar effects and circumstances were described by Dr. Von Tschudi in the *Journal de Chimie Médicale*, 1854, and were widely circulated by the late Professor Johnson in his "Physiology of Common Life." But Dr. Taylor dismisses them as "absurd and exaggerated, utterly inconsistent with all that is known concerning the action of arsenic in this or other countries, and hardly requiring a serious refutation." He relies upon Mr. Kesteven's observations on the arsenic works of Cornwall as clearly proving that the so-called arsenic, or *hidri*, of the Styrian peasant cannot be arsenic as it is known in England, and suggests that it is oxide of zinc, and that hence Von Tschudi and those who have placed credit in his statements have overlooked the most important fact in this strange history. Mr. Heisch has, however, supplied evidence on this score. The powder sent over to him as being the substance and dose daily taken by one person, contains twenty-three grains of pure white arsenic. This gentleman's case is not only known to Dr. Lorenz, but also to Dr. Arbele, Professor of Anatomy in Salzburg, who is cognizant of only two cases; but who affirms his own belief, and that of other medical men in his vicinity, in the prevalence of arsenic-eating, which is concealed from them for the reasons stated. It is alleged in corroboration of these facts, that evidence of the frequency of the practice is occasionally afforded when the graveyards are dug up, as happens in Styria within twelve years after they are closed. It is well known here that arsenic exercises a peculiar preservative influence over the bodies of those who have taken it into the system during life, or even into whose veins it has been injected after death. Long after surrounding remains have fallen into decay they retain their form and natural aspect, undergoing only a kind of waxy yellow mummification. It is stated that numbers of these bodies are discovered in turning up the graveyards, and that the arsenic-eaters are thus recognised. The custom seems to be of long standing in Styria, according to some evidence of Professor Schall-Gruber ("Medicinischer Jahresbuch des Oester: Kaiserstaates, 1822); and hence such evidence might well be expected.

The paper of Mr. Heisch completely reopens the discussion, which we had thought closed. His correspondents reassert with minuteness most of the statements which were rejected as incredible, adding some new elements of apparent miracle to the history, since the largeness of the dose forwarded to Mr. Heisch taxes credulity at least to its furthest limits. In the interest of juridical science, which is likely to be strangely affected by these statements, it is very desirable that an investigation should be made on the spot by a commission of acute and learned persons. We should all like to know the truth, and medical legists can hardly feel themselves secure until all doubts are finally set at rest.

THE PURGATORY OF THE BATH.

Long and persevering homilies from the medical profession on the virtues of water on the functions of the skin, have had the happy effect of establishing the cold bath amongst our permanent English institutions, and spreading widely the habit of employing frequent and tonic ablutions with cold water, which may be described as amongst the chief fortifiers of the British constitution, and the wonder, but not the envy, of continental nations. The cold bath is certainly better understood in England than anywhere else. But it may reasonably be doubted whether the warm bath has been studied with equal success. Our notion of warm baths includes merely a great deal of hot water, or hot vapour, and a certain proportion of soap, or medicinal tincture, according to the purposes of the bath. This was not the hot bath of the ancients; this is not the hot bath of the orientals. They employed a far more ingenious and a far more effective combination of hot air, hot vapour, hot water, and skilful friction. Such were the baths which Hippocrates, Galen, and Celsus prescribed; such were the baths of which Homer sings the praises in the "Odyssey," and which Herodotus says that even the Scythians used in the Trojan War. These were the baths of which Justin records that the Romans taught the art to the Spaniards as early as the Second Punic War; and of which Julius Cæsar brought the secret even to these islands. Of the stately erections consecrated to the service of the bathers remains are yet widely extant—monuments of luxury and splendor. The art has long fallen into abeyance in the west, but has survived in the east. Its restoration has been amongst the consequences of our Crimean War. The luxuries of the Turkish bath were then so widely felt that the attempt to introduce it into Great Britain has met with a deserved success. The credit of this revival is greatly due to Dr. Haughton, who has energetically pressed on the construction of such baths in Ireland, where they have been in use now some time, and are effecting a revolution in bathing, which has only recently extended to London.

In these Turkish baths, soap and water are purely secondary agents; they are considered as barbarous, clumsy, and effete means of cleansing. The bather is first conducted into a room, which is practically a large oven, lighted from the top, and filled with moist air. This is very far, however, from being a vapor bath; the quantity of watery vapor is small, and does not affect the transpiration of water by the skin. Of course a profuse sweating is induced, and the skin is thoroughly softened. It is a hot bath without water, or rather with the aid of very little water From this chamber he passes to another, the calidarium, where, freely perspiring, he is rubbed with towels or goat's-hair gloves; and so great is the effect of the prior treatment that the softened cuticle rolls off in thick flakes, and a new skin is found beneath of which the subject of the operation little dreamed. No one who takes a Turkish bath for the first time but must be astonished at the quantity of unnecessary cuticle which he carries about with him. Adepts tell you that "it requires great dexterity to perform this well without rubbing some places too much and others too little." Now comes a drenching with warm water and soap, which is not the most agreeable part of the bath, and may be considered partially unnecessary. Then the bather passes back to the tepidarium, where he is dried and clothed in warm towels; and, after a pause, thence to the frigidarium, or cool chamber, where, still clothed in warm towels he sips coffee, smokes a narghilet, and indulges in beatific sensations which only those can know who have passed through the three purgatories of the bath. The Turkish bath is an agent of such great power in restoring the active functions of the skin, and the ordinary results of its application are so peculiarly agreeable and invigorating, that it will probably excite the attention of medical practitioners in its relations to disease. It is a powerful agent, of which the virtues are apparent; but incautiously employed by persons liable to congestion of the head or organs of the chest, it is not free from dangers, as some unfortunate circumstances have already proved.

THE SURPRISES OF DEATH.

The contingencies of medical life are fruitful in surprise. To all the elements of emergency which are contained in a pursuit lying amongst men of all classes and characters, and dependent for its estimation on the opinions of each unit amongst a multitude, of whom not two think alike, must be added the peculiar difficulty of attempting to apply fixed rules to an ever variable power, and to govern the forces of life through all the obscurity of the fleshly cerement. What is the history of thearapeutic rules? A given remedy, indicated by inductive reasoning or suggested by chance, is approved to have a certain influence over the human frame in health, and, as a consequence, certain other remedial capabilities in disease. Experience tests their action and records their effects in so many cases—tens, hundreds, or thousands. Daily-recurring use confirms the record, and the accepted fact is registered in medical annals as a guide for the future direction of practitioners. This is the basis on which rests the ordinary use of most of our approved remedies. It is so peculiarly with opium. The powers, the therapeutic action, and the dose of opium, have been the subject of investigations which have occupied many lifetimes and filled many folios. The daily experience of medical practitioners all through the world adds a constant confirmation of these main results, differentiated, of course, by a thousand various conditions under which they are observed. But, after all differences of age, sex, temperament, concurrent disease, and the like, are discussed, there remains still a necessity for carefully watching each case in which this or any other such remedy is employed. in the anticipation of yet unnoted contingencies ; and even then circumstances will arise that are unforeseen and calamitous, which prudence could not avert nor skill remedy.

It is with one of these cases which Dr. W. Burton, of Brompton, near Woolwich, has had the misfortune to meet. He was called to a gentleman attacked with acute rheumatism. The intense pains accompanying the disease are not only amongst its most distressing, but also its seriously debilitating and exhaustive symptoms. Hence the treatment by anodynes, known as the opium treatment, is very widely and successfully employed. Dr. Burton used this treatment with care, and within moderate limits, prescribing a few pills, each containing one-third of a grain of morphia, to be taken every hour. After taking four of these pills the patient fell into coma, from which he could never be recovered. In appreciating this event, it is necessary to bear in mind two sets of facts—the one bearing upon the ordinary doses employed in treating this disease ; the other, on the quantities which the human system will receive with impunity. It is not a year since the records of the practice of an eminent London physician at one of the metropolitan hospitals were published, as to the success and manner of conducting the opium treatment. In those cases, upwards of sixty in number, opium was given in doses of one, and sometimes two grains, every hour during the day, for several days and weeks Some patients took upwards of twenty grains of opium in the day, and above one hundred grains in the week. The results were tabulated, and appear to show a successful issue as to recoveries, while they were all marked by the happy freedom from pain during the progress of the disease which is such a recommendatory incident in this mode of treatment. These cases afforded an extensive and striking illustration of the general rule approved by constant every-day experience, that acute pain establishes great tolerance of anodynes, so that a dose which would produce a marked influence upon the healthy body, is unfelt by the pain-wracked and excited brain, and the drug only begins to soothe when administered in larger quantity. In this case, however, Dr. Burton, proceeding cautiously, administered not more than a grain and one-third altogether, spread over intervals of an hour. Now less than four grains has never been known to produce death in the adult under any circumstances, yet this unfortunate patient suffered fatally from this very small dose, administered at intervals. Under these circumstances we can but express our sense of the perfect justice of the verdict of the coroner's jury, which justified Dr. Burton in the treatment pursued, and affirmed that he had "exercised more than ordinary skill." In this instance Dr. Burton met with an unhappy exception to ordinary physiological laws, which he had no means of foreseeing, and no reason to anticipate. He did all that skill and judgment could suggest. This case will be recorded amongst the curiosities of toxicology, for the guidance and warning of physicians.

THE LITERARY PHANTOM.

A CURIOUS incident has occurred at the Astor Library, New York, not without a special scientific interest. Dr. Cogswell, the chief librarian, has devoted unceasing labor to the arrangement of the library, and the completion of the catalogue of the splendid collection of books under his care. A few weeks since, he entered the library at eleven P. M., bearing a taper, in search of a book. In passing one of the recesses, he saw a well-dressed man standing before the shelves, in whom he recognised Dr. ——, of Lafayette-place, who had died six months before. After a moment's pause, during which he assured himself of the identity of the phantom, Dr. Cogswell addressed him : "How is it that you, who never came to the library during your life, now haunt it after death?" The phantom gazed upon him with dull, passionless eyes, and disappeared. This was perfectly orthodox behavior, but very startling to the doctor. Next night, at the same time, Dr. Cogswell was seized with a desire to repeat his visit, the shadow was there, and a similar scene occurred. On the third night he was still there. The doctor now observed that he was standing before shelves loaded with necromantic works, and, obeying a new impulse, he asked if any one of them troubled his repose, offering in that case to remove them. In reply, the apparition made himself "conspicuous by his absence." Dr. Cogswell now communicated the circumstance to his friends, and acquiesced in their advice, which comprehended rest from his excessive labor, change of scene, and a dose or two of calomel, &c. He is now rid of his singular and distressing hallucination, of which the relation is interesting from its circumstantial character, and the precise resemblance which it bears to so many similar visions which have had unquestionably a like origin, but have not always been so fortunately dispelled or so rationally interpreted.

FEEDING THE NEGRO WHITE.

THE influence of diet upon race is a subject which has considerable speculative interest, and this interest has been increased by recent inquiries into the causes of the variation of species. M. de Quatrefages has commenced a course of lectures at the Museum of Natural History at Paris, on the Unity of the Human Species and the Human Races in General, in which the question of variations amongst vegetable and animal feeders will, it is said, be especially considered. Meanwhile the *Cosmos* recites a letter from M. Abbadie to M. Quatrefages, in which he signalizes an anthropological fact, of which we leave with him the responsibility of announcement. He remarks on the influence of an exclusively animal diet on the color of the Negro. In the south of Nubia, he observes, the inhabitants who feed upon animal food have by far clearer complexions than those who feed upon vegetable diet. In the Kabyle the negroes, who are all butchers, live on the *débris* of the animals which they expose for sale in the market. Their life is passed amidst blood, fresh meat, and the exhalations of butcher's meat. They have a clear, fresh tint, although preserving the crisp, woolly hair. This is considered the more significant because they always intermarry one with the other.

Under a well-devised animal diet it might be possible, according to this observer, to whiten the blackamoor by feeding, though not by washing; and the Ethiopian might change his skin at the dictate of the stomach. Ethnology has a lesson to take in the kitchen. Such opinions are not altogether novel; if we mistake not, they originated with an American philosopher. They call to mind the speculations of the *savant* who concludes that the difference in character between Scot and Southron—"'twixt tweedle-dum and tweedle-dee"—could be traced to the quantity of magnesia in oats.

EXACTION OF DEATH CERTIFICATES.

We have not yet heard a word deserving the name of argument in explanation or justification of the clauses in the Registration Bills for Scotland and Ireland which propose to exact certificates as to the cause of death under penalties. Had the English Act, which has been in operation for twenty years, been shown to have failed for the want of a similar clause, the introduction of the provision, although even on such an hypothesis of questionable justice and expediency, would at least have been intelligible. But the English Act, as we have before said, is a great and a striking success. It is an example of what may be accomplished by a liberal reliance upon the public spirit of the medical profession. We believe that fully ninety-six per cent. of all the deaths occurring in England and Wales are certified. And this is done with compulsion and without reward. Is there a bureaucrat to be found who imagines that the introduction of a penal clause into the English Act would bring up the certified deaths closer than this? To obtain responsible professional testimony as to the causes of the mortality in the community which shall leave only three or four per cent. unaccounted for, is a result which the most despotic centralistic Government might envy. We are shortly to have assembled in Congress amongst us representatives from all the governments in Europe, who will compare the modes adopted in different countries to collect the vital statistics of the people. It may be confidently anticipated that the English tables will occupy a foremost place for completeness and trustworthiness.

The clause as it now stands is as follows:—

"The medical person who shall have been in attendance during the last illness and until the death of any person dying shall, within one calendar month after the death of such person, and under a penalty not exceeding 40. in case of failure, to be paid by such person making default, transmit to the Registrar a certificate of death in the Form (F) to this Act annexed."

As the clause originally stood, the "Medical person" was actually required *to give information of the death* to the Registrar *immediately after* the death. This has been struck out. It depends, we are satisfied, upon our brethren to strike out the penalty also.

We cannot believe that the Legislature will pass this odious enactment, if the attention of independent members be properly directed to its terms and consequences. No time should be lost in doing this. The occasion is one of unusual importance. The medical practitioners of the kingdom should instantly exert themselves to avert this scandalous outrage.

A CANCER NOT CURED.

Cancer-curers have too often tested the hollowness of the bubble reputation to do more than excite the indignant and prophetic ridicule of the profession by their much-vaunted nostrums. The recent death of the Rev. Henry Erskine Head, from the spread of the cancerous affection of which he was the unhappy subject, affords a painful comment on the vain pretensions of a secret method of curing cancer announced some months since with dangerous prominence in the columns of *The Times*. For a moment Mr. Head was buoyed up by the belief that a temporary improvement in his condition, when under the treatment of the Rev. Mr. Reed, afforded just grounds for a hope of a permanent cure, which the more candid and experienced judgment of some eminent metropolitan surgeons unhappily forbade him to entertain. The improvement was, as expected, but of short duration. The cavernous ulceration extended from the pharynx to the roof of the mouth; during its progress he narrowly escaped death by hæmorrhage from some large vessels—a characteristic danger of the mode of treatment to which he was subjected; and he died in aggravated suffering. The remedy to which he submitted proved to be no remedy at all. As other sufferers from this grievous malady have been induced, by the discussion raised on the subject to pass through the same ordeal, it is at least due to all who have been or might be influenced by those delusive statements that the fatal result of this sad case should be prominently placed before them. Once more, too, a voice should be raised to warn the uninitiated public of the grave suspicion which should always attach to secret medicines or nostrums of any kind, and especially to those which are introduced to the general public through the medium of the newspapers, before having been submitted to instructed professional criticism.

Reviews and Notices of Books.

On Obscure Diseases of the Brain and Disorders of the Mind; their Incipient Symptoms, Pathology, Diagnosis, Treatment, and Prophylaxis. By Forbes Winslow, M.D., D C.L. Oxon, &c. pp. 721. London: Churchill.

(CONCLUDING NOTICE.)

The latter portion of Dr. Winslow's work is exclusively devoted to the consideration of Cerebral Pathology. It completely exhausts the subject, in the same manner as the previous seventeen chapters, relating to morbid psychical phenomena, left nothing unnoticed in reference to the mental symptoms premonitory of cerebral disease. The physical indications are now brought prominently forward. These embrace—1. Morbid Phenomena of Motion. 2. Of Speech. 3. Of Sensation. 4. Of the Special Senses. 5. Morbid Phenomena of Vision, Hearing, Taste, Touch, and Smell. 6. Morbid Phenomena of Sleep and Dreaming. 7. Of Organic and Nutritive Life. The work is concluded by a comprehensive chapter on the General Principles of Pathology, Diagnosis, Treatment, and Prophylaxis. Without a perusal, it is scarcely possible to form a just notion of the elaborate and complete manner in which Dr. Winslow analyzes each of these important sections. Disordered Function of the Cerebro-Spinal System, as manifest through Motion, is viewed in relation to—1. Its Impairment. 2. Loss. 3. Exaltation. 4. Perversion. Affections of Motility are investigated, as in their origin, being—1. Cerebral. 2. Spinal. 3. Peripheral. In a similar manner the several other chapters are each so arranged that, for the purposes of reference, no difficulty exists in ascertaining the author's views respecting any isolated or complicated fact likely to arise in the diagnosis or treatment of the extensive class of diseases to which the work is devoted. In Chapter XVIII., Dr. Winslow enters on the consideration of General Muscular Debility, as evidence of early incipient cerebral change, or as symptomatic of impending paralysis; and cites numerous remarkable illustrations of its phenomena. He subsequently considers a state of Muscular Tremor, Spasm, Convulsion, and disordered Condition of the co-ordinating Motor Force. The various forms of Epilepsy are analyzed, and the principles which determine their separate diagnosis discussed at considerable length. Particular attention is directed to the pseudo and hidden types of Epileptic Disease, Epileptic Vertigo, and Nocturnal Seizures accompanied with slight muscular convulsions. The premonitory symptoms these severally present are fully set forth. Affections of the Tongue and Muscles of the Mouth, Disorders of the Nervo-Muscular System resulting in Paralysis Agitans, and disease of the Spinal Cord, are each investigated as evidencing perverted conditions of motility or presenting symptoms whereby the seat and nature of obscure morbid actions may be determined.

The nineteenth chapter, on the Morbid Phenomena of Speech, is replete with interest. Dr. Winslow divides the subject, and considers it in the following order:—1. Cerebral Localization of Speech. 2. Irregular Action of Articulation. 3. Impairment and Loss of Speech. 4. Morbid Imitative Movements of Articulation. 5. Involuntary Articulation. Some idea may be thus formed of the searching analysis which has been made of this important portion of the subject. The graphic style in which the work is written cannot be too highly spoken of. In asserting that its manner is worthy of its matter, we recognise the erudition of an accomplished scholar as well as the reasoning of a philosophic physician. Who that has had experience will fail to appreciate the fidelity and force of the following observations?—

> "In the incipient stage of disease of the brain, the patient, if he has not lost all power of articulation, will be observed, occasionally, to stammer, and his words are sometimes half formed, and *clipped*. He also shows signs of great embarrassment when speaking. He commences a sentence without finishing it, either forgetting what he intended to say, or having a difficulty in using the right word to express the conceptions originating in his mind. How frequently does this paralysis of *ideas* precede for a length of time all other evidences of vocal muscular loss of power? This cerebral affection is considered by some to arise from a failure of memory; but such, I think, is not the fact. It is a paralysis of *ideas* which I have seen to exist for a long period antecedently to any actual and noticeable loss of muscular or sensorial power. The patient has, however, in many cases a clear notion of what he *wishes* and *means* to say, but is either unable to, or has extreme difficulty in, pronouncing the words characteristic of his thoughts."

Of the many cases which illustrate this particular condition, we affirm that there is not one but contains practical suggestions of the highest value. We quote in illustration:—

> "A literary gentleman, whose vocation in life was that of a public lecturer, noticed for nearly *eight* weeks before he was seized with paralysis that occasionally, whilst speaking, he lost for a second or two all power of articulation. This occurred on five or six occasions previously to an attack of decided hemiplegia. This patient had taxed his powers of mind to their utmost by lecturing twice, and often thrice, a day. But independently of this amount of literary labor, he had been exposed to much anxiety respecting family matters, and this had produced restless and, in some instances, sleepless nights."

The Morbid Phenomena of Sensation next come under review. These Dr. Winslow considers as they are found amongst the early and premonitory symptoms of cerebral affections. He investigates them—1, in their exaltation; 2, impairment; 3, perversion or vitiation. The exaltations of special sensibility, as observed in vision, hearing, taste, and touch, to indicate incipient stages of cerebral inflammation, are contrasted with conditions which causes of a purely local character are capable of originating. Referring to vertigo as an indication of disease, Dr. Winslow writes:—

> "In all affections of the brain, the sensation of illusory movements, termed vertigo, or giddiness, stands prominently forward among the significant and important incipient symptoms. In some respects it is more characteristically diagnostic of serious cerebral

disease, organic and functual, than that of headache, even in its more acute form of manifestation. If the vertigo be clearly an idiopathic encephalic affection, and not, as is often the case, symptomatic of some form of stomach, heart, hepatic, visceral, renal, or blood disease, we may infer that the state of the brain is entitled to careful pathological analysis and earnest therapeutic consideration."

Medical authorities are divided in their estimate of the value of headache as a symptom of organic disease of the brain. Dr. Winslow observes :—

"It may be affirmed, as a *postulate*, that all organic diseases of the brain are accompanied by vertigo, headache, acute and chronic, or by some abnormal physical sensation within the cranium. Cephalalgia, however, may be considered as an almost invariable accompaniment of all cerebral affections. This symptom is rarely absent, particularly in the early or acute stage of the encephalic disease. In some forms of tumour, and in those obscure alterations of tissue connected with general paralysis, the patient often positively denies that he has headache, or ever was subject to any cerebral pain or uneasiness. I have, however, after minute inquiry, generally ascertained that cephalalgia has existed, but been forgotten by the patient, arising in many instances from an impairment of intelligence and loss of memory. In cases of advanced general paralysis and chronic softening of the brain, the patient stoutly maintains that he is quite free from all headache, and will not admit that he suffers from vertigo or any description of uneasiness within the cranium, but his actions clearly demonstrate that there exists an hyperæsthesia of the brain."

This chapter, and that which immediately follows, on the Morbid Phenomena of the Special Senses, abound with practical observations of the highest value. Those incipient symptoms of softening of the brain which are of the greatest importance for the purposes of diagnosis in its curable stage are pointed out with great minuteness and accuracy, while at the same time the necessity for practical caution in forming a differential diagnosis is forcibly impressed on the investigator. Dr. Winslow writes :—

"In estimating the value of all morbid evidences of the special senses supposed to be symptomatic of brain disease, we must carefully consider their normal state, making proper allowance for any previously existing idiosyncrasies in their mode of action."

This may appear to be an observation which would suggest itself to each inquirer, and yet the neglect of the caution it conveys has in many cases proved the source of the greatest amount of mischief where unnatural manifestations and exquisite conditions of the sense of seeing, hearing, touch, and taste, existed quite apart from disease of the brain.

Dr. Winslow proceeds to consider the more characteristic symptoms of centric cerebral amaurosis connected with organic diseases of the brain and disturbances of the cerebral circulation, and investigates the ordinary premonitory associated symptoms, by means of which we may be facilitated in our diagnosis of *cerebral* from *sympathetic* conditions of morbid vision. "Derangement, perversion, or aberration of sight," Dr. Winslow considers, "will be found more frequently symptomatic of disease of the brain, than impairment, loss, or exaltation of the function of vision." He remarks :—

"Such morbid states of the eyes vary from slight disturbances and irregularities of sight to actual illusions, *ocula spectra*, and phantasms. The physiognomy of the eye is peculiar in these cases of brain disease. This symptom should be accurately observed. The eyes present occasionally an unnatural brightness, and the vision an intensity of power, when the patient's attention is concentrated upon any subject, or if engaged in exciting topics of conversation."

The Morbid Phenomena of Hearing observable in the early stage of affections of the brain are frequently of an exactly opposite character. Dr. Winslow states that "Occasionally, amongst the incipient symptoms of cerebral disease, there is a sudden paralysis of the auditory nerve, destroying all sense of sound ;" and again, "In the incipient stage of certain affections of the brain the hearing often becomes painfully acute ;" while in a third case the hyperæsthesia of hearing causes the patient "to hear noises and voices appreciable only by himself—a condition of disordered acuteness often witnessed for some time previously to the patient manifesting any observable *alienation* of intellect characterized by illusions or hallucinations."

The Morbid Phenomena of Sleep and Dreaming, as identified with and intimately dependent upon the state of the brain, and the varied affections of the sensorium (functional as well as organic), are carefully considered. Dr. Winslow distinguishes between insomnia resulting from a pathological condition of the brain, and that which, connected with mental derangement, arises from "a complete absorption, abstraction, concentration of the thoughts, and pre-occupation of the mind, in some terrible and fearful form of illusion, or frightful type of hallucination, that has firmly seized upon the imagination."

The Morbid Phenomena of Organic and Nutritive Life are considered in their relation to—1. Digestion and Assimilation. 2. Circulation. 3. Respiration. 4. Generation. In describing the functional derangements which the stomach exhibits in the early stages of insanity, Dr. Winslow carefully distinguishes between closely similar affections arising from widely different causes. Having detailed the symptoms which mark the sympathy existing between the brain and organs of digestion, he writes :—

"In tumours of the brain, the patient will be often heard to complain not only of irritability, but of a disposition to vomit. The nausea so induced in a remarkable manner resembles that preceding or accompanying sea-sickness. The patient is rarely, if ever, actually sick, but he constantly feels so at the stomach. This sensation of nausea is occasionally observed more prominently manifested on first rising in the morning. The patient, when washing, or whilst shaving, will be suddenly stopped by an inclination to vomit. A person who was troubled by this symptom, caused by a cerebral tumour, remarked that it appeared as if he were constantly rolling about in a boat at sea, or repeatedly under the influence of small doses of tartar-emetic or ipecacuanha. I have observed this symptom in some cases of abscess of the brain. A gentleman, who died suddenly of this disease, was annoyed some months previously to his decease by a troublesome and depressing sensation of nausea. For some time this symptom was supposed to arise from disordered state of the stomach, and he was treated for this affection. After examining the case several times, I diagnosed disease of the brain (tumour). There were associated with the nausea severe vertigo, and paroxysmal attacks (somewhat localized) of headache. The cerebral abscess was considered to be the effect of a severe injury inflicted upon the head by a fall from a horse whilst hunting ten years previously."

We are thus brought to the concluding chapter of this remarkable work.

To attempt to enter on the General Principles of Cerebral Pathology, Diagnosis, Treatment, and Prophylaxis, as Dr. Winslow details them, would be to open the volume anew, and retrace the vast experience it unfolds. All that modern science can suggest is laid before the reader. It is enough for our purpose to quote Dr. Winslow's observation, that

"In all acute affections of the brain and disorders of the mind, the cure and life of the patient depend—1, *upon the speedy detection of incipient symptoms*: 2, *upon the accuracy of the diagnosis formed as to the nature of the cerebral affection*; 3, *upon the immediate application of the remedial treatment*."

The truth of this assertion must irresistibly impress itself on those who read this volume. There is, however, one class of pathological conditions we are unwilling to pass over in silence. Dr. Winslow asks:—

"Do we estimate in a manner commensurate with its grave and vital importance the necessity of watching with the most scrupulous care the cerebral symptoms that follow all mechanical injuries to the head? I am satisfied that a vast amount of organic, chronic, and incurable disease of the brain and disorder of the mind can be directly traced to this cause. .... Repeatedly have I had cases of epilepsy bidding defiance to all treatment, tumours, abscesses, cancer, softening of the brain, as well as insanity in its more formidable types, under my care, whose origin could unquestionably be traced back, for varying periods of one, two, five, eight, ten, fifteen, and even twenty years, to damage done to the delicate structure of the brain by injuries inflicted upon the head."

The incipient symptoms of softening, as also of paralysis of the brain, are described at great length by Dr. Winslow. He has accurately detailed the stealthy, insidious, and, if unchecked, fearfully destructive progress of these types of cerebral disease. He has graphically protographed, as it were, the gradual advance of these sad maladies from their commencement—loss of memory, impaired powers of attention, defective continuity of thought, vacillation of will, confusion of ideas, depression of spirits, irritability of temper, irregularities of articulation, misuse of words, headache, vertigo, sensation of numbness, muscular debility, loss of vital stamina, the symptoms of actual bodily paralysis, mental imbecility, and at last idiocy. It is gratifying to hear from a physician of Dr. Winslow's high reputation and extensive experience of disease of the brain as well as of the mind, that softening and paralysis of the brain admit of easy cure, provided they are recognized and skilfully treated in their incipient stages. What an amount of bodily suffering and hopeless mental imbecility might be prevented if the practical and scientific views proposed in Dr. Winslow's work were generally diffused throughout all ranks of society!

Dr. Winslow points out the difficulties which the practitioner has to encounter when attempting to cure the more severe forms of chronic brain and mental disease, if apparently fixed and established in the head. These affections of the material organ of thought must be detected and firmly wrestled with on the threshold—that is, in their premonitory stage —before trifling and curable functional „disorder" passes into incurable organic "disease."

It is impossible to overrate the benefits likely to result from a general perusal of Dr. Winslow's valuable and deeply interesting work.

Small-pox and Vaccination Historically and Medically Considered: an Inquiry into the Causes of the recent Increase of Small-pox, and the Means for its Prevention. By Alfred Collinson, M.D. pp. 85. London: Hatchard.

This is a book of facts, and Dr. Collinson in the first sentence of the "Introduction" has very appropriately expressed his objects in publishing it—"The purpose of the following pages has been to develop, if possible, the causes of the increase of small-pox, and to point out the means whereby vaccination, its only sure preventive, may be restored to its pristine efficacy." He further remarks that, "the subject is one not merely of professional or scientific interest, but of the deepest moment to the public at large;" and it is really to be hoped that this pamphlet will find its way into all quarters where it might be useful in promoting the benevolent views of its author. Dr. Collinson has, as he states, endeavored to collect and present to the reader "the pith and marrow" of the information which he has found scattered over an infinity of histories, treatises, reports, and statistical returns. His industry deserves the highest praise. He has quoted the more important summaries of the opinions of observers in all parts of Europe; and, in particular, he has paid a due tribute to the labors of Mr. Simon, referring especially to the mine of information furnished by that gentleman in his most valuable Report on Vaccination to the Board of Health in 1857, in another general Report in 1858, and a shorter one to the Privy Council (of which he is the medical officer) in 1859.

The author commences his task by giving a sketch of the history of small-pox and its progress through the world, and he shows the vast extent and frightful effects of its ravages, clearly proving it to be one of the most destructive plagues that ever devastated mankind. To this part of the work we cannot devote more space than to state that, notwithstanding, from certain hints in ancient writers, the small-pox is supposed to have been known in times of antiquity, the first distinct notice of that disease is to be found in the writings of the historian Procopius, who asserts that in 544 it broke out in Egypt. The first recorded case in Europe is probably that of Elfrida, daughter of Alfred the Great, in the tenth century; and Rhazes, the Arabian who lived in the same century, was the first author who wrote clearly and expressly on the disease. From that period, it appears to have spread rapidly over the known world. No rank was exempted from its ravages. Even at the end of the seventeenth century, its virulence retained its pristine force so much that it is mentioned, as proving how powerless the best medical aid of the day was against its inroad, that six immediate relatives of William III. fell victims to this terrible malady. As the first means of mitigating its severity, the author refers to inoculation, introduced amongst us at the commencement of the eighteenth century. He shows, however, that the result was unsatisfactory in this respect, that while giving security to the individual, that practice maintained the existence of the disease, and tended to its increase, and so, on the whole, was mischievous to the community. A picture is drawn of the unprotected condition of the public throughout the eighteenth century, at the close of which the discovery of vaccination held out to mankind a prospect of relief, which has been more than realized by its wonderful results.

Next is given an account of the vaccine disease amongst cattle, followed by the interesting history of the great discovery. The author remarks that "It had been known from an early period amongst the great dairy-farms in Gloucestershire, that cows were affected with a peculiar pustular disease, which could be transferred to those who milked them; and a belief prevailed in the dairies, that the milkers thus affected might be exposed in any way to the contagion of small-pox, and yet escape that disease." He traces the profoundly interesting experiments of the immortal Jenner up to the crowning success of the brilliant theory which his genius suggested, and which his experiments realized—the proof that inoculation with the vaccine virus might be perpetuated from one subject to another. There is, however, a singular circumstance connected with this portion of the inquiry, which is not generally known. The matter of the "grease," a disease to which the heels of horses are liable, when transferred to the human subject, produces a pustule similar to the vaccine, and equally protective against small-pox. The fact was proved experimentally by Jenner himself. The author states—

> "It now appears certain that there are at least four animals—namely, the horse, the cow, the sheep, and the goat (and to these the pig and the ape may probably be added,) which are effected with a disorder which may be conveyed to man by inoculation, and thus becomes capable of defending him from a malignant form of the same disease—namely, the small-pox of the human subject."

Then we have an amusing account of the reception of the discovery, and of the excitement occasioned by it, in the medical world. Next follows a brief history of the rapid progress of vaccination, and its immense results in reducing the ravages of small pox. In 1799, a knowledge of Jenner's discovery and the practice of vaccination were conveyed to Geneva, Hanover, and Austria; in the following year to France; in 1801, to Spain, Denmark, Sweden, and Russia; subsequently to Italy, most parts of Germany, and Poland; in 1802, to Greece; in 1803, to Turkey and Asia; it having been introduced practically into North America in 1801, and into the Spanish American possessions in 1803. In little more than six years after its promulgation it was known in every clime! Such was the formidable nature, then, of the terrific plague which vaccination superseded, that the suffering nations caught promptly and eagerly—as well they might—at the astounding means of protection which had been providentially placed at their disposal.

Dr. Collinson then proceeds to the interesting question—What is the vaccine disease? Clearly and indubitably, according to the proofs adduced, it is small-pox itself which, mitigated by its passage through the cow, is introduced by vaccination into the human system; and, by thus undergoing a mild form of the disease, the constitution is protected against its future recurrence.

The labors of Mr. Simon have enabled us to ascertain what reduction in the mortality from small-pox has resulted from vaccination. In London during the eighteenth century the mortality from variola was at the rate of 3000 to 5000 per million of population per annum; during the ten years from 1846 to to 1855 it was under 340 per million. The committee of the Epidemiological Society published that whereas during the half-century preceding vaccination, out of every thousand deaths from all causes an average of 100 arose from small-pox, in the ten years ending 1850 the deaths from that disease were only 16 per thousand; and that while before any protection the deaths from small-pox were as 42, during the period of inoculation with that disease they rose to 54, and since that in which vaccination has been practised they have sunk in London to the average of 14. Dr. Farr states that in 1854 the mortality from small-pox, measles, and scarlatina combined was only half as great as that formerly occasioned by small-pox alone. Dr. Collinson mentions that during the twenty-eight years previous to the discovery of vaccination, there died in Sweden from small-pox 2050 annually per million; whereas the rate during forty years after the discovery was only 158; in Westphalia it was before this period 2643; after 114; in Bohemia, Moravia, and Silesia, before, 4000; after, 200; in Berlin, before, 3422; after 176.

> "In other words, the fatality of the disease is in Denmark but an eleventh of what it was; in Sweden, little over one-thirteenth; in Berlin and large parts of Austria, one-twentieth; in Westphalia, but a twenty-fifth. In the last-named country there now die of small-pox but four persons where formerly there died one hundred."

Dr. Collinson then proceeds to consider the causes of the recent outbreaks of small-pox, and traces them to—

1st. Defective vaccination.

2ndly. Deterioration of the lymph used in vaccination from long descent.

3rdly. The want of an adequate supply of good vaccine matter.

4thly. The want of Government interference, and of efficient legislation, to enforce the universal practice of vaccination.

Defective vaccination he ascribes to the use of vaccine lymph taken from imperfect pustules. He enumerates the various causes from which such imperfections may arise, and points out the rules of Jenner for the selection of the true or pure vaccine lymph.

Dr. Collinson enters into the very important question—whether vaccine lymph has a tendency to deteriorate by transmission through a succession of human bodies. He refers to the inadequacy of the present supply of lymph to meet the exigency of the demand. This would appear to be in a great measure owing to the diminution of the resources of the National Vaccine Establishment, if not to the neglect of the managers of that institution in not obtaining fresh supplies of virus from the cow. That the efficacy of the lymph may undergo deterioration by continued transmission through human bodies may be accounted for on the following grounds:—

It has been proved that small-pox may, after a series of inoculations, approximate in mildness to cow-pox; and Dr. Adams, physician to the Small-pox Hospital, succeeded in producing a benign form of the disease by selecting only the mildest attacks of small-pox from which to inoculate. If, then, as Dr. Collinson remarks, that disease could be so qualified by selection and transmission, it is not to be wondered at that a modified disease such as *vaccinia* should become weakened by transmission in process of time.

Having analyzed the causes of the diminished efficacy of vaccination, the author next considers the remedies to be applied. He refers to the recent regulations of the Privy Council for improved instruction in the theory and practice of vaccination, and for obtaining a supply of vaccine lymph. He follows out the important experiments of Mr. Ceely of Aylesbury, and conclusively establishes the fact that a perfect lymph may be artificially procured by inoculation of the cow with human small pox. With respect to the preservation of lymph, we have the experienced authority of Mr. Marson, of the Small-pox and Vaccination Hospital, for stating "that vaccine lymph will keep very well on ivory points for five or six months, and, perhaps, longer." But, Mr. Marson remarks, "it is, however, better, and more certain of effect generally, when kept but a short time before being used."

Dr. Collinson lastly points out what yet remains to be done in the way of legislation, and shows how by very simple means, vaccination may be universally enforced, and so the plague of small-pox, lately assuming so formidable a character, be driven from the land. We quote that portion of this interesting pamphlet with much satisfaction:—

"We have next to consider what remains to be done in the way of legislation in a matter so important to the public weal. It is plain that though all shall have been done to provide a sufficient supply of lymph, and to secure its efficiency, the work will still be incomplete unless two things can be insured: 1, the prevention of the voluntary propagation of small-pox by inoculation; 2, the universality of vaccination. The first, because the security to the individual is purchased at the cost of an infinitely greater danger to the rest of the community, each case of small-pox being a centre from which the poison may radiate, thus tending to keep alive and perpetuate the mischief; the second, because every unvaccinated person, being liable to take small-pox, becomes on infection, like the inoculated patient, the means of transmitting the disease.

"Much has already been done by the Legislature in these important particulars, but it may be questioned whether the work of legislation is as yet complete.

"By the statute 3 and 4 Vict. c. xxix, s. 8, inoculation with small-pox matter is made an offence, punishable, on summary conviction, by a penalty of 20s. There does not seem any reason to believe that inoculation is now in effect practised, and it may be hoped that no medical practitioner would be a party to the violation of the law. Nevertheless, as in the event of a further spread of small-pox, it is impossible to say what the sense of individual danger and the desire of individual security may lead persons to do it may not be amiss to call attention to the lownes of the penalty, and to suggest that, in a matter of such paramount importance, the observance of the law might be enforced by the sanction of a graver punishment."

On this point we venture to differ in opinion from Dr. Collinson, as we believe that the small penalty in this instance has operated with great effect. A larger one might not have been recovered with so much facility. The penal clause in question was introduced into the Act on the motion of Mr. Wakley, M.P. for Finsbury. At first the proposal encountered much opposition, and possibly it was only carried in consequence of the trifling amount of the penalty.

"With respect to the enforcing of vaccination, besides various statutory provisions for securing gratuitous vaccination to the poor, through parochial authorities, vaccination, by the 16th and 17th Vict., c. 100, is at length made compulsory. The father or mother of every child, or the person having the care, nurture, or custody of a child, is bound to take the child—the former within three months, the latter within four months of its birth, if not already vaccinated by some duly-qualified medical practitioner and the vaccination duly certified—to the medica officer or practitioner appointed by the union o parish, in order that the child may be vaccinated On the eighth day following, the child is again to be brought to the medical officer, or practitioner, who if the vaccination has been successful, is to give a certificate to that effect, and transmit a duplicate to the registrar of births and deaths of the sub-district The registrar, having the means of comparing the number of vaccinations with that of births, is, in the event of any child not being vaccinated within eight days after its birth, to give notice to the father or mother, or person having care of the child, to take the child to the medical officer or the practitioner appointed for vaccination; and omission, after such notice, to take the child to be vaccinated, as also to take it for inspection on the eighth day after vaccination, renders the party liable to a penalty of 20s.

A moment's reflection will show, that for the purpose of coercion the law is insufficient. The only person who has the means of ascertaining whether vaccination has taken place on every birth is the registrar of births and deaths, who, by comparing the register of births with the medical certificates of vaccination, is at once able to ascertain whether vaccination has in any case been omitted. Unfortunately, the supervising control of this officer is confined to giving the notice already referred to at the end of eight days from the birth. The Act, however, allows three months to the parents, and four months to a person having the care of a child, to fulfil the requirements of vaccination. But no further duty is cast on the registrar, or, indeed, on anyone else, of instituting any inquiry to see whether all children born in the districts have, in fact, been vaccinated. Again, although the Act imposes a penalty, there is no one whose duty it is to enforce it in case of disobedience. The consequence of these omissions is that, to a great extent, the Act remains a dead letter. Now, I would venture to suggest that a duty should be imposed on the registrar of comparing the register from time to time with the certificates of vaccination, and of reporting to the parish officers the cases in which vaccination has been neglected; and that a duty should be cast on these last-mentioned officers to summon the offending parties before magistrates, with a view to their conviction and the infliction of the penalty. It may also well be questioned, whether the maximum of the penalty is not too low; and whether provision ought not to be made for a further conviction, with increased penalties, on non-compliance within a further short period; and so from time to time, until the law has been obeyed."

These suggestions are well entitled to receive the attention of the Government and the Legislature, as it is quite evident that the law does not at present provide an adequate safeguard against the ravages of a most terrible malady.

"No reasonable objection, it is apprehended, can be raised to coercive legislation in a matter so vitally affecting the well-being of the whole body of the community. Infants, unable to secure to themselves the means of future safety, are entitled to be protected against the possible neglect or culpable indifference of parents. Where the safety of all is involved, it cannot be questioned that the State is justified in interfering with the freedom of individual action to insure the common safety, and protect the whole body of society from the danger of pestilence and death.

"From what has been said in these pages the following practical conclusions may, it is submitted, be drawn:—Vaccination, if properly conducted, may be made the means, if not of actually extirpating small-pox, at all events of reducing that disease within such narrow limits, as that it shall no longer be a source of general danger and alarm. To attain this great result, certain conditions are necessary: that the process of vaccination shall be conducted by practitioners perfectly acquainted with, and careful to observe, the requisites essential to its success; that the lymph used shall be of perfect quality; that vaccination shall be, without exception, universal. We are further warranted in concluding that the unsuccessful results of vaccination, and the consequent increase of small-pox are to be ascribed to unscientific administration of the remedy, either in the use of imperfect lymph, or in inattention to the indications, from which alone a successful result may be assumed to have been secured;—to the want of universal vaccination, either owing to a deficiency of lymph, or to the absence of a thoroughly effectual system of coercive medical police.

"On the other hand, we may comfort ourselves with the conviction, that the remedy is within our own power. The praiseworthy measures recently taken by the Government for securing in future the thoroughly-scientific performance of vaccination will, it may be hoped, insure that important desideratum. The use of lymph taken from imperfect sources will be checked, when practitioners have become impressed with the necessity of discriminating between the perfect and imperfect, and have acquired, by proper training, the power of judging between them. Above all, the experiment and science, having established the fact that, by passing the virus of small-pox through the body of the cow, the virus of cow-pox may be artificially obtained, identical in characteristic properties with that obtained from the spontaneous disease of the animal, a supply of fresh and perfect lymph may be at all times procured commensurate with the public requirement. Lastly, there seems no reason to doubt that a slight amendment only of the law will suffice to insure the uniform practice of vaccination throughout all classes of the people.

"While, therefore, we ought not to shut our eyes to the fact that the recent increase of small-pox affords a well-founded ground of public anxiety, and is sufficient to call for the vigilant attention of those whose province it is to watch over the sanitary condition of the country; yet, on the other hand, we may rest assured that there is no reason for despondency, or ground to doubt that, by the application of prompt and energetic measures, wholly within our power, the efficiency of vaccination may be established in all its integrity; and so, the dire calamity of epidemic small-pox may, under the blessing of Providence, be averted from this and future generations.'—pp. 79–85.

Our limited space obliges us, as a rule, to quote but briefly from the works which are reviewed in this journal; but on this occasion our extracts are of unusual length, in consequence of the vast importance of the subject under consideration, and the very judicious and able manner in which it has been treated by Dr. Collinson. His pamphlet has been published at a very opportune period, and the whole question is one which ought, without delay, to engage the serious attention of the Legislature. It really is a public scandal and a discredit to our civilization, that in this country, where the great and brilliant discovery of vaccination was made, the measures for its propagation have been less efficient than those in several foreign countries. In the hope that some really effective legislation will take place on the subject in the present session of Parliament, we take leave of the question at this time, strongly recommending the admirable pamphlet of Dr. Collinson to the perusal both of the profession and the public.

The Monographic Dictionary. A Guide to the Examination and Investigation of the Structure and Nature of Microscopic Objects. By J. W. Griffith, M.D., and Arthur Henfrey, F.R.S., &c. Second Edition. London: J. Van Voorst.

On the appearance of the first edition of this volume, we spoke of it in high terms of commendation. In this issue, the work has been revised throughout, and additions and alterations made in accordance with the progress of the various sciences to which it refers. Numerous new figures have also been added. The Dictionary is a most valuable one to all interested in the study of microscopic objects.

The Medical Knowledge of Shakspeare. By JOHN CHARLES BUCKNILL, M.D. 8vo. pp. 292. London: Longman & Co.

This new work of Dr. Bucknill appears to have been suggested by the book which Lord Campbell last year published on Shakspeare's legal acquirements; and although the author explicitly disavows any intention to put forward rival claims in behalf of the medical profession for the honor of having occupied that seven years of Shakspeare's early manhood of which not the slightest biographical trace remains, yet he does come forward in some degree as the advocate of his profession. He confesses "that it would be gratifying to his professional self-esteem if he were able to show that the immortal dramatist, who bears, as Hallam says, 'the greatest name in all literature,' paid an amount of attention to subjects of medical interest scarcely if at all inferior to that which has served as the basis of the learned and ingenious argument that this intellectual king of men had devoted seven good years of his life to the practice of the law." Dr. Bucknill argues that although the frequent and appropriate use of technical expressions—the trade-marks of the mind—can only be accounted for by their having been stamped upon the memory by some pressure more urgent than casual and general conversation, it must be remembered that the facility of using these expressions has often been acquired by poets for the purpose of their art; and that, moreover, these signs of peculiar mental training would have had less value in the olden time, as a mark of a man's profession, than at present, when every calling is so defined. From the indications afforded by the use of professional technicalities, the author passes to the less obvious but less deceptive one to be found in the existence of a professional habit of mind; and he compares the influence of these habits as they affect the professions of Law and Medicine with that of Shakspeare's mental character, and arrives at the conclusion that no professional warp of mind can be detected. But while he thus concludes that Shakspeare had never been formally connected with either of the learned professions, he yet believes that he had been a diligent student of both. "Speaking on my own subject of investigation, I refer to the cumulative evidence collected in the foregoing pages as unanswerable proof that his mind was deeply imbued with the best medical information of his age." This passage affords a key to a great part of the value of Dr. Bucknill's work, which consists not only in an investigation of the medical knowledge of his author, but in a careful examination of the best medical information of the age in which this author lived; so that the work before us, full of antiquarian research on this special point of inquiry, gives us a very interesting account of Medicine in the fifteenth and sixteenth centuries. In the Introduction, of fifty-six pages, this inquiry is directed rather to the social and legal state of the profession; to the great powers of the new College of Physicians, maintaining their rights even against Walsingham and Queen Elizabeth; to the arbitrary manner in which they upheld the Galenical doctrines against the heterodoxy of those who adopted the chemical doctrines of Paracelsus; to the spicy vituperation of the College contained in Dr. Gideon Harvey's works; and to some account of the physician who married Shakspeare's eldest daughter—a provincial physician of great repute, in whose family circle it is probable that Shakspeare passed the latter period of his life, and from whose society he may have derived some portion of his medical knowledge

Our limits will not permit us to give any adequate account of the mass of medical references which Dr. Bucknill has accumulated from the plays, every one of which, with the exception of the doubtful play of "Titus Andronicus," contains several. These references, which are merely used for the purpose of illustrating general subjects, or are woven into the tissue of common dialogue, indicate, by their number, extent, and variety of reference, the medical turn of thought of the great man's mind. It must be remembered that he nowhere professed to write on any medical subject; and that, as well-bred men avoid talking what is called "shop," so his knowledge nowhere appears to be displayed: it oozes out naturally under the pressure of the dialogue, and the whole extent of his lore on any one medical subject can only be inferred by collecting the several references made to it in the various plays.

Dr. Bucknill would, doubtless, have added to the value of his work if he had systematically done this for his readers. The plan he has adopted has been to examine each play *seriatim;* and, perhaps, upon no other plan would the inquiry have been so fully and fairly made, especially as in many places he marks passages illustrating each other; but still the reader would require to study the whole of the work before he could ascertain the extent of Shakspeare's information on any one topic.

Let us take as an example the question as to what Shakspeare's opinions were respecting the functions of the heart and of the bloodvessels. In the Shakspeare Society's Papers is an article attempting to show that, although he died before Harvey had given the earliest notice of his opinions, yet it was probable that Shakspeare was the personal friend of the great anatomist, and had these opinions privately communicated to him, and had expressed them in the lines in "Julius Cæsar":—

> "Thou art as dear to me as are the ruddy drops
> That visit my sad heart."

Now Dr. Bucknill declares his opinion that although there are many passages in the plays in which the presence of the blood in the heart is more pointedly indicated than in the above, yet "there is not a trace of any knowledge of the circulation of the blood. ...... The flow of blood to the heart was a fact well known and recognised in Shakspeare's time. It was the flow of blood from the heart, and round again in a circle of the heart—that is, the *circulation* of the blood,—which was not known to Shakspeare or to any other person before Harvey's immortal discovery." Shakspeare entertained the opinion, universally received at that time, that the function of the arteries was to contain the vital spirits and transmit them to different parts of the body. Thus he speaks of

> "The nimble spirits in the arteries."—LOVE'S LABOR LOST.

And one of the physiological effects of "good sherris sack" was, acccording to *Falstaff*, that

> "The vital commoners and inland petty spirits,
> Muster me all to their captain, the heart."

(See the author's disquisition on the whole of this remarkable passage, page 155.) But the heart contains blood, and is often oppressed with its load. Thus in "Measure for Measure"—

> "Why does my blood thus muster to my heart?" &c.

And again, in *Warwick's* description of the signs of violent death, he attributes the absence of blood in the face of a person dying of natural disease to its accumulating at the heart; the blood, he says,

> "Being all descended to the laboring heart,
> Who, in the conflict that it holds with death,
> Attracts the same for aidance 'gainst the enemy,
> Which with the heart there cools, and ne'er returneth
> To blush and beautify the cheek again:
> But see, his face is black and full of blood."

In Shakspeare's version of the fable of the belly and the members, he makes the former say of the food it receives—

> "I send it through the rivers of your blood,
> Even to the court, the heart, the seat of the brain,
> And thro' the cranks and offices of man,
> The strongest nerves and small inferior veins," &c.

The flow of the blood to the heart, and its existence in the heart therefore, were facts fully accepted by Shakspeare; but the blood was considered to be contained in the veins, not in the arteries, and its flow supposed to be caused by the liver, not the heart.

In the description of Lucrece's suicide, the color of the two different kinds of blood is referred to, and the separation of serum from the clot is described—

> "About the mourning and congealed face
> Of that black blood a watery eigol goes."

The cause assigned for this is, that the blood is corrupted—

> "Corrupted blood some watery token shews."

It is a curious circumstance that in this opinion, erroneous as we now know it to be, the great physiologist agreed with the dramatist—

> "These parts (that is coagulum and serum) have no existence severally in living blood; it is in that only which has become corrupted, and is resolved by death, that they are encountered." (Harvey on Generation.)

The prevalent diseases of the time would be those to which Shakspeare would naturally refer; the most prominent appear to have been ague and pestilence; disorders of the stomach (massed under the general name of surfeits), nervous diseases, epilepsy, apoplexy, and "hysterica passio," are likewise largely referred to. Venereal disease is also a frequent subject of the author's comment—grave or gay. It was to some extent a novelty in his time; it prevailed widely, and necessarily attracted great attention. One of the most remarkable of Shakspeare's medical descriptions is that of the secondary symptoms of syphilis, as they are detailed by *Timon*, of Athens when he is pouring treasure into the laps of the courtezans:—.

> "*Timon.* Consumptions sow
> In hollow bones of men: strike their sharp shins,
> And mar men's spurring. Crack the lawyer's voice,
> That he may never more false title plead,
> Nor sound his quillets shrilly. Hoar the flamen
> That scolds against the quality of flesh,
> And not believes himself. Down with the nose,
> Down with it flat: take the bridge quite away
> Of him, that his particular to foresee,
> Smells from the general weal: make curl'd-pate ruffians bald;
> And let the unscarr'd braggarts of the war
> Derive some pain from you. Plague all,
> That your activity may defeat and quell
> The source of all erection. There's more gold;
> And ditches grave you all!"

Dr. Bucknill compares this enumeration with Brasser's contemporary description of syphilis, which Hamilton, in his "History of Medicine," says is the most complete account of the disease to be found in any author of the period; and he shows that the representation of the dramatist is superior in accuracy to that of the physician. The work before us contains some curious results of research on the treatment of this disease, as it is described by Shakspeare, by "powdering tub of infamy," by tubs and bottles, and by sweating medicines.

We trust we have said enough to send our readers to the book itself, which they will be unable to read without greatly increasing their knowledge of the works of the immortal dramatist, and that, too, in a direction which to numbers of our profession will be most interesting and instructive; but they will also find a large amount of curious and valuable research into the early history of medicine in this country, and into the social state of the medical profession in the sixteenth and seventeenth centuries. Dr. Bucknill complains that no medical history exists which gives this information; that medical historians copy from each other; that, generally speaking, they satisfy themselves with describing the progress of knowledge, and that they do not set forth the state of medical opinion and practice existing at the different periods of their history. This, perhaps, is inevitable. The future historian of the present age will, no doubt, describe the discoveries of Sir Charles Bell, Marshall Hall, and Brown-Séquard; but it is not probable that he will trouble his readers to any great extent with descriptions of the rise and fall of the great homœopathic and mesmeric humbugs of the day, or even with questions of real but transitory medical interest, as the old lancet treatment of all disease, which has now died off, or the abuse of brandy treatment, which appears to be coming on. Yet questions of this kind mark the actual state of medical opinion more truthfully than the slow but sure progress of science. Dr. Bucknill has endeavored to rehabilitate the state of medicine in the time of Shakspeare, by referring to original authorities who describe its grotesque errors and dark ignorance, as well as to those who trace its progress towards the fuller knowledge in which we live.

Dr. Bucknill's work is one which will be read by the scholar and the physician with equal interest. The chapter treating of the state of the profession at the time of Shakspeare furnishes the most complete account we have seen on the subject. We cordially recommend the perusal of "The Medical Knowledge of Shakspeare," to our readers.

The Management of Infancy. Physiological and Moral. Intended chiefly for the Use of Parents. By **Andrew Combe**, M.D., F.R.C.P. Edin., &c. Ninth Edition, Revised and Edited by Sir **James Clark**, Bart., M.D., F.R.S., &c. pp. 302. Edinburgh: Maclachlan and Stewart.

We quite agree with the general opinion that there is not any work upon the subject of infant hygiene in which is to be found so much valuable practical information, to guide young practitioners in the management of infants and children, as in this treatise of Dr. Combe. We are not surprised, therefore, at the issue of even a ninth edition, though we did not look for its fresh introduction at the hands of so eminent an editor as Sir James Clark. To the subject of the hygiene of early life we know that Sir James has paid much attention during a lengthened professional career, and we now learn that a long and intimate friendship with Dr. Combe afforded frequent opportunities of discussing with him the topics treated of in these pages. We do not think, then, that the former could have more usefully occupied his leisure in his retirement than in lending his powerful aid to forward the benevolent intentions of the latter, nor have paid a more graceful tribute of respect to the memory of an esteemed friend than in thus editing one of the most useful of his works.

As the eighth edition was corrected by Dr. Combe himself, it was left so perfect that the editor tells us he has found little remaining for him to do. What has been effected however, the following will show:—

> "In making the few alterations and additions which appeared to me necessary, I have endeavored to identify myself with the author, and to do merely what I believe he would himself have done if his valuable life had been spared. In this spirit I have gone carefully and repeatedly over the whole work. I have altered the order of some of the chapters, with the view of bringing the subjects treated of more consecutively before the reader. I have also ventured to omit some portions, chiefly in the earlier chapters, as less necessary now than during the author's life. I have given some additional information on the causes and extent of infant mortality, taken chiefly from the recent Reports of the Registrar-General. And, lastly, I have added an Appendix, in which will be found some useful matter, not so well fitted for the body of the work."

We may add, that a very sensible and practical Introduction of some twenty pages, has likewise been supplied by the editor. We cordially recommend this new edition of a most useful book to the attention of junior practitioners.

Illustrations of Puerperal Fever. By **Edward Copeman**, M.D., M.R.C.P., Physician to the Norfolk and Norwich Hospital, &c. pp. 137. London: Churchill.

In 1856, the author of these "Illustrations" wrote a paper to show the value of turpentine in the treatment of puerperal fever. He has since then accumulated an additional number of cases, which confirm and strengthen his opinion that that drug is more to be relied upon than anything else in combating this terrible disorder. He observes:—

> "Undoubtedly, much care and judgment are required in the administration of turpentine. Some persons are less tolerant of it than others. If it be persevered with after it has seemed to disagree, it may do much harm; where it is still persisted in after the stomach has rebelled against it, its further effects are more pernicious than salutary. But, on the other hand, I have seldom found it disagree during the time that its internal administration is needful; and even when not more than one or two doses can be borne by the stomach, it can still be used with immense benefit as an external application, or as an injection into the rectum......With respect to the best mode of administering turpentine internally, recent experience has convinced me that the stomach is less likely to rebel against it when given either in simple water or in brandy-and-water than in any other form or combination."—p. 8.

Dr. Copeman can now illustrate his views by the results of fifty-seven cases. Of these, thirty-eight were cured, and nineteen were fatal. This proportion, he conceives,—we are compelled to say on imperfect information,—is far more favorable than any that has yet been recorded in midwifery practice, and therefore he feels that he cannot too earnestly and too perseveringly urge upon his fellow-practitioners the importance of giving turpentine a full and fair trial.

Selected Monographs: **Kussmaul** *and* **Tenner** *on Epileptiform Convulsions from Hæmorrhage;* **Wagner** *on the Resection of Bones and Joints;* **Graff's** *Three Memoirs on Iridectomy in Iritis, Choroiditis, and Glaucoma.* The New Sydenham Society. pp. 380.

This is the fifth volume for the first year, and contains translations of three important and well-known essays from the German. With this issue is also published a list of the honorary local secretaries and members of the Society. Certainly we must admit that, so far as practical purposes extend, the child bids well to far exceed in utility its father—the old Sydenham Society. We have the intentions of the Council for the ensuing year's issue before us, and they offer every guarantee that the subscribers shall obtain the full worth of their subscriptions. Amongst the volumes promised is one which will comprise "Clinical Memoirs on Abdominal Tumours and Intumescence," by Dr. Bright, collected and reprinted from the "Guy's Hospital Reports." This work will in itself be worth the money, well edited as no doubt it will be by Dr. Barlow. We wish the New Sydenham Society every success.

Practical Observations on the Cure of Syphilitic Affections by the Aix-la-Chapelle Hot Sulphureous Water. By L. **Wetzlar**, M.D. pp. 29. Aix-la-Chapelle.

As there is something more in this pamphlet than a mere flourish of trumpets for Aix-la-Chapelle, we can recommend its perusal to such persons as may fittingly make that spa a resting-place during their continental trip in the present season.

On Rheumatism, Rheumatic Gout, and Sciatica ; their Pathology, Symptoms and Treatment. By Henry William Fuller, M.D., Cantab., F.R.C.P., Physician to St. George's Hospital. Third edition. pp. 489. · London : Churchill.

Dr. Fuller's work appears to be accepted by the profession as the fullest and most satisfactory exposition extant of the subject of which it treats. A third edition has hence been called for, and which the author, as he informs us, has endeavored to render as complete and useful as possible by bestowing more than ordinary care upon its revision, by adding many practical suggestions, and by carefully recording the results of his experience as to the action of remedies which have been recently introduced :—

> "On the subject of chronic rheumatism much still remains to be ascertained: for I am satisfied that many maladies are included under that comprehensive title which have nothing more in common than have small-pox and chicken-pox. I have endeavored, as far as possible, to separate the different varieties, and to point out the remedies to which each is most amenable.
>
> "In the chapter on Sciatica and Neuralgic Rheumatism, I have given the result of my experience as to the effect of injecting morphia into the cellular tissue, and have also specified the conditions under which galvanism, electricity, and other remedies prove useful ; I have also appended a few cases illustrative of the treatment recommended."

The author lets fall a hint that he may on a future occasion, lay before us his views upon Gout. If so, we hope he may then be as successful in keeping the ear of the profession as he has been in addressing them upon so hackneyed a subject as rheumatism, upon the consideration of which in the work before us he expends very nearly 500 pages.

The International Quarantine Conference of Paris in 1851–52. With remarks by Gavin Milroy, M.D., F.R.C.P. pp. 7. London, 1859.

Quarantine as It is and as it Ought to be. By Gavin Milroy, M.D., F.R.C.P. pp. 12. London.

In 1850, upon the invitation of the French Republican Government, it was agreed amongst the different States which had coast possessions in or close to the Mediterranean that an international conference on the subject of quarantine should be held in Paris. The leading conclusions of this conference form the subject-matter of the first of these pamphlets of a well-known writer upon quarantine matters. In reference to these conclusions, Dr. Milroy addresses two interrogatories to the medical profession, with the view of directing attention to an exact and scrutinizing investigation of the points submitted. The interrogations are as follows :—

> "1. What evidence is there to show that any of the three diseases against which quarantine is especially directed—viz., cholera, yellow fever, and the plague—has ever been introduced into any place or country by a vessel on board of which no case of disease had occurred during the voyage, and which was also free from sickness on arrival ?
>
> "2. On what trustworthy evidence rests the doctrine, that while the lapse of five days' exemption from any signs of the cholera among the crew and passengers in a ship is considered to be a sufficient guarantee against the risk of that disease being imported, double and triple that period is necessary for the like security in respect of the yellow fever and the plague."

These are plain, straightforward, sensible questions, the proper solutions of which can alone fitly determine some of our fundamental principles of existing quarantine legislation and practice.

In the second pamphlet, the author gives us a sketch of what he considers as the more important items for quarantine legislation. Dr. Milroy is an authority upon this subject well worthy of the attention of our readers.

Therapeutics and Materia Medica. A Systematic Treatise on the Action and Uses of Medicinal Agents. By Alfred Stillé, M.D., late Professor of the Theory and Practice of Medicine in the Medical Department of Pennsylvania College, &c. &c. 2 vols. 8vo. Philadelphia : Blanchard and Lea. London : Trübner and Co.

The plan pursued by the author in these very elaborate volumes is not strictly one of scientific unity and precision ; he has rather subordinated these to practical utility. His chief object has been to show the real value and curative power of medicines as afforded by the accumulated testimony of physicians. He has eschewed all theories as to their modes of action, and has founded their claims to employment on the results of the experience of competent and impartial practitioners, both in ancient and modern times, and in most civilized countries. Dr. Stillé has produced a work which will be valuable equally to the student of medicine and the busy practitioner.

On the Nature of the Substance found in the Amyloid Degeneration of various Organs of the Human Body. By Francis Harris, M.D. Cantab., Demonstrator of Pathological Anatomy at St. Bartholomew's Hospital, Assistant Physician to the Hospital for Sick Children, &c. pp. 23, and a Plate. Westminster : Brettell.

This is "a thesis for a Medical Act in the University of Cambridge," the perusal of which we can well recommend to our readers. The conclusion arrived at by Dr. Harris relative to the *starchy* nature of the bodies found in the brain, and the *cellulose* nature of amyloid degeneration of different organs, is as follows :—

> "All that we are justified in concluding is—that the reactions of these substances with iodine and sulphuric acid indicate their analogy, not their perfect identity, with the substances of the amylaceous group. —p. 23.

The pamphlet contains a good *résumé* of an interesting subject.

Histoire Littéraire des Fous. Par Octave Delepierre. pp. 184. London : Trübner.

This charming little book touches upon a field of literature hitherto almost neglected. It makes us acquainted with some of the peculiar characteristics of the literary effusions of men who very frequently have unfortunately had more than one "screw loose." Examples of their poetry, of their philosophy, of their religion, and of their scientific views, are here tastefully laid before us, and the whole strung together by such passing comments of the author as render the perusal of M. Delepierre's essay both an amusing and an instructive duty. We can strongly recommend this interesting little work.

Foreign Department.

ON THE MEANS TO BE EMPLOYED IN SYNCOPE FROM HÆMORRHAGE AFTER SURGICAL OPERATIONS.

M. **Debout**, Editor of the *Bulletin de Thérapeutique*, has published, in a late number of that periodical, a valuable article, wherein he shows, by facts and arguments, that this syncope is not to be treated like the fainting which occurs after parturient hæmorrhage. M. Debout concludes with the following rules:—

1. Syncope following traumatic hæmorrhage is a more serious symptom than the fainting resulting from uterine hæmorrhage, both on account of the nature of the blood lost and its less rapid escape; it may, therefore, be affirmed, that the means found successful in the latter complication are not, as a consequence, likely to be efficient in the former.
2. As syncope, in traumatic hæmorrhage, is the result of want of stimulus to the nervous centres, the remedy will consist in putting the patient upon his back, and in lessening the extent of the circulation by abdominal pressure.
3. As we are to be especially anxious for the energy and duration of our therapeutic interference, we should add to the physical action of the means above alluded to the stimulation of the heated steel knob, rapidly carried over various parts of the cutaneous surface, and assist this operation by enemata of wine. This syncope is so perilous that all the above measures combined will never be too powerful.

M. Debout thinks that transfusion of blood in these cases is not to be relied upon.

THE QUESTION OF PREMATURE ARTIFICIAL DELIVERY IN CASES OF UNCONTROLLABLE VOMITING.

L'Union Médicale of the 3rd of April publishes a long and valuable article on this question, the occasion of which was a case under the care of an hospital physician of Brest, M. Caradec. The patient was a lady of twenty-two, who, in the second month of her first gestation, was seized with vomiting, which nothing could arrest. She died towards the end of the fourth month, after some days of apparent improvement. M. Caradec had adopted in this case a mode of consultation which seems usual in France, but is not so in this country. He had sent an accurate account of the symptoms to *L'Union Médicale*, asking for the opinion of the committee of medical gentlemen who, under the guidance of M. Latour, edit the paper. Both M. Caradec's letter and the answer are inserted in the journal, death having taken place subsequently to the use of the remedies suggested by *L'Union Médicale*.

M. Caradec wished to deliver prematurely, but was afraid of incurring the responsibility. It would appear, from the document sent to him by the above mentioned paper, that two eminent accoucheurs of Paris, M. Chailly Honoré and M. Cazeaux, differ in their opinion as to the question at issue; the first is a strong supporter of artificial delivery, and the latter is opposed to it. M. Cazeaux remarks that, although five successful cases have been quoted in English obstetric works, we are not acquainted with all those in which the operative interferences alluded to has failed to relieve the symptoms.

SUBCUTANEOUS INJECTIONS OF SULPHATE OF ATROPINE IN TETANUS; RECOVERY.

M. **Pescheux** has communicated the following case to the Surgical Society of Paris. A woman had met with a scalp wound and a compound fracture of both bones of the leg, in consequence of the falling-in of a chimney. For three weeks she progressed very satisfactorily, when tetanus set in with great violence. After almost every one of the usual remedies had been employed, M. Pescheux subcutaneously injected, along the spinal processes of the cervical vertebræ, a solution of sulphate of atropine in the proportion of one grain of the salt to one hundred of water. About two-thirds of Pravaz's syringe were used, when the patient was seized with the well-known symptoms of belladonna poisoning, which lasted about twelve hours. The tetanic manifestations, when these symptoms abated, were much less severe; and after another injection, made twenty four hours afterwards, which, however, did not affect the patient so much as the first, she completely recovered.

ON THE COLORATION OF SIGHT AND URINE PRODUCED BY THE ADMINISTRATION OF SANTONINE

M. **Flourens** presented to the Academy of Sciences of Paris, at the meeting of the 12th ult., the second edition of M. Martini's work on the above subject. M. Flourens stated, that of the two effects of santonine mentioned, the former was certainly the most curious. Most persons who take santonine see objects green, some blue, and others straw-colored. In the present edition, M. Martini has added new cases and quoted those which had been published in England and France. In this edition also will be found some trials of santonine in nervous affections of the eye.

A woman, aged sixty-three, was affected with imperfect vision of the left eye. No visible alteration could be detected when M. Martini saw her in March, 1859. The pupil, however, was sluggish, and larger than on the right side; in the aqueous humour a whitish cloud could be detected; and the patient could hardly distinguish light from darkness. M. Martini resolved upon trying santonine, and she was given for five days from four to six grains daily. She then saw, four or five times in the course of the day, objects of a greenish yellow, even with the weak eye. Eight grains were now daily given, and besides seeing things colored, as stated before, she could discern the faces of the persons around her. On the 20th and 22nd of March, she still saw everything yellow, and more distinctly than before. The administration of santonine was now given up, and the improvement remained stationary.

In another case, santonine was given for two days to a patient who was amaurotic on both sides; and after that time the retina was found more sensible to light than before.

A third case is also mentioned, in which the paient had lost the right eye, and was amaurotic of the eft. He was given ten grains daily. In a week he ould read some words written in large letters on the rall.

CTION OF THE PERIOSTEUM WITH REGARD TO THE FORMATION OF THE CALLUS IN UNUNITED FRACTURE.

When, in non-union of bone after fracture, a seton is used, and a callus forms in consequence of the inflammation excited by the foreign body, it is supposed that the ends of the bones suffer necrosis, and that the callus is generated by the surrounding tissues. It would, however, appear from a case lately brought before the Academy of Sciences of Paris by M. Jebert de Lamballe, that the action of the seton upon the periosteum is sufficient to conduce to the formation of callus.

M. Jobert had to treat a case of non-union of the tibia, of six months' standing, in a man aged forty-two. A seton was introduced and brought in contact with the periosteum, the seton not touching the extremities of the fragments. It was left ten days, and suppuration ceased six days after its removal. In five weeks union had taken place; neither exfoliation nor necrosis occurred, and consolidation, says M. Jobert, must have been the consequence of an effusion from the periosteum, which effusion seems to possess the power of generating bone. The author further remarks that union was obtained in much less time than happens when the seton is passed between the extremities of the fragments. In the present case the periosteum alone was concerned in the formation of the callus, whilst in those just alluded to, necrosis, followed by granulation in the ends of the bones, is the rule.

DISARTICULATION OF THE HIP ONE OR MORE YEARS AFTER FRACTURE OF THE FEMUR BY GUN SHOT WOUND.

M. **Jules Roux**, head surgeon of the naval department at Toulon, has read an elaborate memoir before the Academy of Medicine of Paris, wherein he discusses the propriety of the disarticulation of the hip in gunshot wounds connected with fracture of the femur. The author holds that amputation at some point of the shaft of the bone should not be performed when the femur has been shattered, and cicatrization does not follow. In such cases disarticulation at the hip should be performed, because the bone is likely to have suffered osteomyelitis, and, under such circumstances, no good results can be obtained in amputating at the shaft. M. Roux quotes six cases of his own, wherein he performed disarticulation, out of which four patients recovered. He condemns primary disarticulation in cases of shattering about the superior third of the femur; these operations have seldom succeeded, whilst several cures, without operative interference, have been recorded.

BLACK PIGMENT OF THE EYELIDS (CHROMYDROSIS).

M. **Hardy**, physician to the St. Louis Hospital, lately brought before the Medical Society of the Hospitals of Paris a case of black pigment of the eyelids, which occurred at Brest, in the practice of M. Leroy de Méricourt.

It would appear that this peculiar complaint, although hardly known in other parts of France, has been observed seven or eight times at Brest, always upon women, belonging to various ranks of society.

The present case refers to a young lady of nineteen, who, on returning from church two years ago, and after having been rather painfully excited, noticed black stains on her eyelids. The blots persisted without any disturbanse of general health or menstruation, the only apparent symptom during this period being a few spots of acne about the limbs. On the 17th of September, 1859, M. Hardy found her in the following state:—Cutaneous aspect of upper and lower lids on both sides covered with a greyish-black layer, which, examined closely, looked like coal-dust; mucous membrane a little vascular; eyes normal. By passing a piece of linen moistened with oil on the lids, a dark spot like lamp-black was left on the linen. After this cleansing process the eyelids looked normal, even when examined with the magnifying glass. Two hours afterwards the lids were black again. All kinds of applications used to prevent this secretion have successively failed. Some members of the Society thought there might have been some deception in these cases.

TUMOUR OF THE RIGHT INGUINAL REGION CONTAINING LUMBRICI; RECOVERY.

The tumour was painless, and of small size; pus formed, the abscess broke and discharged thin purulent matter, with twelve lumbrici. No peritonitis occurred, the pus was not fœtid, and presented no traces of fæcal matter. M. Batata, the medical attendant, left the complaint to Nature, only covering the opening with a piece of lint spread with simple ointment. In a few days the abscess closed, and the patient did well. The *Gaz. Méd. de Paris*, of the 12th inst., in quoting this case from the *Revue Thérap. du Midi*, mentions neither the sex nor age of the patient.

ANCHYLOSIS OF THE KNEE; TENOTOMY AND RUPTURE OF INTRA-ARTICULAR ADHESIONS.

This case refers to a boy of eleven, whose leg was considerably flexed and fixed from inflammation and suppuration of the joint, consequent upon a punctured wound. Tenotomy of the flexor tendons and forcible stretching were resorted to. Six weeks afterwards the boy could walk without a stick. The *Gaz. Méd de Paris* of the 12th inst., does not state whether the joint was eventually movable or not.

EXAMINATION OF THE SUPERFICIAL PORTIONS OF THE EYE BY MEANS OF NATURAL LIGHT LATERALLY REFLECTED FROM A DOUBLE CONVEX LENS.

M. **Laborie** lately read a paper before a Medical Society of Paris, wherein he speaks of the advantages of the ophthalmoscope, and those of the lamp-light reflected laterally. He, however, finds fault with the latter mode of illumination, and prefers the natural light, reflected from a double convex lens, held in the hand of the surgeon, an inch and a half from the patient's eye. In this manner he has been enabled to examine affections of the cornea, of the anterior chamber, the iris, the pupil, and the lens. The great comfort is, according to the author, that the examination may be made at once, without repairing to a darkened room, or having recourse to artificial light, &c.—*Union Médicale*, May 8th.

RUPTURE OF THE VARICOSE VEINS IN THE VAGINA DURING LABOUR; DEATH.

A stout woman, aged twenty-three, whilst in labour of her first child, was seized with very severe pain during the passage of the head, the presentation being quite normal. The perinæum was suddenly put on the stretch, and gave way in spite of the greatest care used by the accoucheur to prevent its rupture. Soon after the birth of the child, severe hæmorrhage occurred; syncope and convulsions rapidly followed, and in about ten minutes the patient expired. On a post-mortem examination, it was discovered that the varicose veins of the vagina had given way; the uterus was firmly contracted, and contained no blood.—*Berliner Zeitung*.

PARISIAN MEDICAL INTELLIGENCE.

(FROM OUR OWN CORRESPONDENT.)

As the present season is the one most frequently selected by English medical men for a visit to Paris and its hospitals, I think that very possibly a few words of advice and guidance from an old hand may not be out of place. That a man well versed in our own system of practice has still much to learn at Paris is, I think, incontestable; and although he may turn away with horror from a case of pneumonia treated *à la* Bouillaud, nevertheless, when he shall have seen that, despite such barbarisms, patients *will* recover and live on, he will be enabled to gather for his own private consolation in his future career the great fact, so often overlooked now-a-days, that the human animal, like the cat, is very tenacious of life and monstrously hard to kill—in which great fact lies the solution and explanation of the riddle of many a quackery.

Before starting for Paris, get together as much French as you can, note-books both large and pocket, and some strong pairs of shoes, for you will really have to *walk* the hospitals here. On arriving, go to a good hotel, the best in the town—Meurice's, the Lawn, and such-like. I know, from ten years' experience, that there is no economy in singling out a second- or third-rate establishment, more especially when required to occupy a room there but for one night. As soon as you have rested from the fatigue of your journey, you must think of your lodgings. If you wish to be in a central situation equally near to all the great hospitals, cross the river and ask for the Quartier Latin, and an hour's walk in the Rue Jacob, Rue de Seine, Rue St. André des Arts, Rue de la Harpe, Rue de Tournon, or Rue de l'Odéon, will take you past the doors of some dozens of lodging-houses (hôtels meublés or garnis), at which, for prices varying from thirty to eighty francs a month, can be obtained a very decently-furnished lodging, comprising one, two, or three rooms, according to price. Do not be afraid of mounting a few pair of stairs; you are leaving behind you an atmospheric substratum the perfume of which in a warm spring night is anything but grateful or reviving. There are several English families in the neighborhood of the Rue de Rivoli and Tour St. Jacques who receive boarders; addresses of such persons can be obtained at any of the house-agents' officers; and the terms are very moderate, not exceeding 140 fr. per month, which includes everything except firing, I believe.

So much for lodging; and now concerning hospitals. If you have plenty of time on hand, do as you please—see everything, make the round of all, beginning at Beaujon and sweeping round the town to Lariboisière, St. Louis, Ste. Eugénie, &c., until you end at the Invalides, after a glorious campaign; but if in a month, or even six weeks, you hope to carry back with you a sack of grist—to get, in fact, your money's worth out of Paris, such a plan will never answer. In coming to Paris for a month, as you cannot see all, you naturally wish to study what can be acquired nowhere else; and that one thing is, without doubt, *perfection in the art of diagnosis*. This alone constitutes the strength of the French medical schools; of their weak points I shall say nothing.

In the annexed table will be found a list of those hospitals which it is indispensable for the student to visit if he wishes to obtain a just idea of what the relative value of French and English practice is at the present time. As all the hospital practice is over by ten o'clock, there is ample time left during the day for dissection, lectures, or attendance on the ophthalmic dispensaries, the latter forming a very important item in the list of advantages afforded by a residence in this capital. The Salles d'Anatomie of Clamart are open at all seasons; and for the sum of 100 francs (or £4 sterling) as much surgery and anatomy can be prosecuted under the direction of a professor as will more than satisfy the most zealous.

A Week's Work at Paris.

Monday.—At 7½ A.M., Hôtel Dieu; Trousseau and Jobert de Lamballe. At 8 A.M.: Nélaton at clinique. At 8 A.M. : Lariboisière ; Chassaignac, operations with écraseur. At 12 P.M. : Desmarres, Eye Dispensary. At 2 P.M. : Sichel's Eye Dispensary. Lectures at Faculty, all day and every day.

Tuesday.—At 8 A.M., La Charité : MM. Velpeau and Beau. At 9 A.M., Hôpital des Enfans Malades : MM. Rogier and Guersant. Discussions at Académie de Médecine, at 3 P.M.

Wednesday.—At 8 A.M., Hôpital Ste. Eugénie : MM. Bouchut and Barthez. At 12 P.M. : M. Desmarres, Eye Hospital.

Thursday.—At 8 A.M., St. Louis : M. Hardy, skin diseases. At 1 P.M. : M. Desmarres, ophthalmoscope. At 2 P.M. : M. Sichel, operations.

Friday.—At 9 A.M., Hôpital du Midi : M. Ricord. Very far off, but on the same day, at 7 A.M., the Hôpital du Val de Grâce may also be seen, being on the way to the former.

Saturday.—At 7½ A.M., La Pitié : MM. Becquerel and Maisonneuve. Hôpital Lourcine (Female Venereal Hospital), with special permit from the central bureau. At 9 A.M., Hôpital Necker : M. Civiale, lithotrity.

The discussions of the Academy of Medicine on Tuesday last opened with a somewhat angry remonstrance on the part of M. Michel Levy regarding certain expressions which fell from M. Piorry during the debate on the previous Tuesday. The Professor of the Charité had made use of some terms, in criticizing a diagnosis made by a member of the army medical staff in a case of intermittent fever, which were held by the speaker to be "ironical, contemptuous, and offensive" towards that body. A noisy skirmish ensued, in which Professor Malgaigne took part, and some temper was shown on both sides. The latter gentleman, while deprecating any invidious feeling on the part of M. Piorry towards the army surgeons generally, suggested that although an error of diagnosis was highly improbable amongst such a learned and estimable body of men, still that such a contingency was just within the bounds of possibility, and that consequently the exasperation of feeling expressed was hardly justifiable. At this stage of the proceedings a note from M. Piorry, disclaiming any sentiments other than those of the greatest respect and esteem for the parties who considered themselves aggrieved, was put in and read, and so ended the Academical white squall.

A report of the committee named to test the value of the administration of the perchloride of iron in cases of purpura hæmorrhagica was next read by M. Devergie. The original communication to which this had reference was a paper from M. Bize of Montélimart, in which details of several cases of the above malady were given, where this drug had been administered with marked success, the best results having been obtained by the use of the preparations in subdivided doses to the amount of one gramme (sixteen grains) per diem. The author moreover insisted upon the remarkable sedative effect produced by the remedy upon the heart's action ; and this statement certainly seemed to be borne out and verified by the cases appended to the paper.

A series of experiments had been instituted at St. Louis, and the action of perchloride of iron, in cases of purpura hæmorrhagica, closely studied by several medical men, and M. Devergie amongst them. The report tended to confirm the views of M. Bize in regard to the rapidity of cure by this agent ; but the speedy diminution of pulse had not been observed—"indeed," remarked M. Devergie, "in such cases the pulse is rarely accelerated, and consequently our opportunities of observation were on this point very limited ; but it does not seem probable that any preparation of iron should possess this sedative action noticed by M. Bize in a degree even more marked and more decided than digitalis itself."

It is very probable that on Tuesday next the subject will be again discussed, as M. Trousseau gave notice of his intention of reopening the debate on a future occasion, and the *vexata questio* of the mode of action of ferruginous compounds on the human economy has long been a hobby with the talented Professor of the Hotel Dieu, who astonished the medical public here a few months back by some very novel views on this head during his course of clinical lectures at the above-named hospital.

The proceedings terminated with the reading of a paper, or rather part of a paper, by Dr. Depaul, on three very interesting cases of complete occlusion of the os uteri during pregnancy, in which delivery had been effected by the help of the bistoury ; and, in one case, the cephalotribe, as in consequence of the narrowing of the pelvic brim, the head could not be conveniently reached by the forceps. In this particular patient the closure of the womb and disappearance of the cervix were such as even to render the discovery of the former site of the os impossible, although the speculum was used for that purpose.

Paris, June, 1860.

THE discussion on the mode of action of iron generally, and the perchloride in particular, was continued, on the 5th inst., by M. Trousseau, whose address occupied the whole of the two hours allotted by the Academy to its weekly debates. The Professor of the Hotel Dieu made a long differential analysis of the two pathological conditions, anæmia and chlorosis, and of the therapeutic action of iron in each. The whole object of his discourse was to disprove the theory of the chemical school,—the "*chimiatres*," as they are called,—who hold that the curative agency of iron, in both classes of diseases, is owing to the reconstitution of the blood by the direct absorption and chemical combination of this mineral with its elements. In anæmia, he remarked,—such anæmia, for example, as can clearly be traced to loss of blood, as after flooding,—the normal and physiological condition can be perfectly re-established, without the administration of a single grain of iron, by generous diet and plenty of fresh air.

In chlorosis, M. Reveil has proved, by chemical investigation, that there is no want of iron in the blood; that the same quantity is found to exist during a chlorotic attack as afterwards, when the patient has completely recovered. And though M. Trousseau admits that steel is almost a specific in this complaint, he cannot allow that this beneficial result is to be attributed to any chemical appropriation by the blood of the mineral administered. Young girls are often suddenly affected with chlorosis, who, so far from losing too much blood, have *retained* more than Nature intended them to do. A sudden chill during the course of the catamenia has checked the discharge, and produced chlorosis. Proper medical treatment dispels the chlorosis by reproducing the menstrual flow, clearly demonstrating that this condition did not depend upon a diminution in quantity of the blood or its elements.

During the critical examination of the chemical treatment of diseases, M. Trousseau commented on Dr. Garrod's work "On Gout and Rheumatism," and scouted the idea of the uric acid diathesis, and its neutralization by an alkaline treatment. He cited an experiment of M. Claude Bernard, which he considers as conclusive on this point. By introducing into the stomach of a dog, through a fistulous opening in the abdominal wall, a few drachms of carbonate of soda, and then testing with litmus paper, M. Bernard found that the subsequent reaction was far more powerfully acid than usual, and that the result attained was exactly the contrary of that which had always been taken for granted. Consequently, M. Trousseau continued, when a tendency to the generation of certain abnormal acids by the stomach is removed by alkaline treatment, this change must be attributed to some other *modus operandi* than that of simple chemical action.

After a very lengthy amplification of these views, the Professor concluded by stating it as his conviction that the empirical method, the result of experience and experiment, was the surest and soundest after all, and protested against the acceptance, as scientific truths, of certain theories which could hold their ground neither practically nor controversially. This verdict against the chemical school of therapeutists from so important an authority has set the Academy by the ears, and we may expect next week to hear some of the champions of the party attacked reply in its defence.

M. Piorry, physician of the Charité, some years ago astonished the medical public by the announcement that the discutient action of the sulphate of quinine upon an engorged spleen was almost instantaneous; and that, on percussing the region of the enlarged organ, *thirty seconds after the administration of a potion containing a certain dose of this drug*, a considerable diminution might be observed in its size. This theory he delighted to demonstrate by mapping out with colored chalk the limits of the spleen, and then requesting some bystander of sceptical aspect to convince himself of the fact by testing with his own fingers the striking alteration produced so rapidly by a wine-glassful of quinine mixture. Not a few of your readers, some even of the incredulous St. Thomas stamp, have been thus converted to a belief in the magical influence of bark in dissipating engorgement of the spleen with a "presto-pass" charm that rivals Robert Houdin, or Anderson, the Wizard of the North. To-day, however, comes a Marplot, a dispeller of these pleasant illusions—prosaic M. Nonat. He takes the same colored chalk pencil to the bedside of a patient suffering from ague, draws the same pretty sketch of his engorged spleen, gives the patient a drink of water only, and finds the organ reduced within the limits of the pretty sketch to the same extent that M. Piorry did when administering his bitter draught; explaining the same by saying that, as the stomach is in the habit of contracting its walls upon receiving the stimulus of an ingestum, the spleen, which is perched like a coachman on the dickey at its left side, follows the contracted organ, and its surface is thus withdrawn in part from contact with the abdominal walls. This is too bad, and M. Piorry has to swallow his long-cherished quinine theory in the shape a bitter pill.

A work, from the pen of Dr. Sée, on the connexion between chorea and rheumatism, more especially that form of the latter which affects the heart and its enveloping membrane, has lately appeared, and is well spoken of. That an intimate relationship exists between these two pathological conditions was observed some years ago by Dr. Bright; and some cases are cited by him, if I recollect rightly, in the "Guy's Hospital Reports." M. Trousseau, I am told, goes a step further, and maintains that rheumatism in the parent is often, by hereditary metamorphosis, transmitted to the child under the form of chorea. The question is one replete with interest—as must, indeed, be all these which fall within the still obscure and ill-explored domain of nerve-function.

Paris, July, 1860.

THE discussion at the Academy of Medicine was brought to a close by M. Piorry, on Tuesday last. It had long become most interesting to the general public from the fact that the participators in the debates seemed entirely to have forgotten that the point to be settled was the relative claims of the chemical and dynamic modes of action of perchloride of iron on the human economy; and, moreover, that the academical arena was not intended as an exercising ground for the benefit of old broken-kneed hobbies. M. Piorry, in the course of his answer to M. Trousseau, managed to give all his stud a turn and an airing. We had a reference to the instantaneous diminution of the spleen in ague, as affected by quinine (a little experiment only lately shown by M. Nonat); we heard a great many diseases called by a great many ugly names—all of M. Piorry's own coining from ancient Greek material; we heard constipation simplified and explained by being termed "scorenterasie," incipient phthisis reigning under the title of "phymo-sclerosie;" and we were reproached, in company with the medical world at large, for not having adopted this "classical, rational, and not inharmonious nomenclature" with that eagerness which its projector would have considered becoming.

and appropriate in welcoming so glorious a conception.

We were told that Pott's disease, under which comprehensive term M. Piorry groups no less than twenty separate pathological conditions, could be cured by phosphate of lime, this drug being directly conveyed to the diseased osseous tissues for their repair, just as might a mason carry his hod of mortar to the wall which he is employed in rebuilding. These, and the action of chemical antidotes in poisoning, of nitric acid in lead colic, of alkalies in gastralgia and gout, of nitrate of silver in aphthous sores, and of quinine in the tubercular meningitis of children, were the arguments destined to crush M. Trousseau and his vitalist theory.

M. Piorry concluded by an appeal to M. Trousseau's feelings. In this appeal, he asked whether, as a question of simple gratitude for past services, M. Trousseau should not relent a little, and allow to chemistry a modest corner in the sphere of therapeutical action, and terminated by saying that when men had nothing to say better worth hearing, they had better (*se taire*) be silent—a conclusion we all wished the talented Professor of the Charité had arrived at eight days before. Here, I hope, the matter may end; and as M. Bouillaud withdrew his name from the discussion some days back, there are no more champions likely to come to the rescue. Were this the only sample I had ever seen of the academical debates, I should rate the medical oratory of France very low indeed. There are, however, many members of the Academy who rarely speak, but who possess debating powers of the very highest order, requiring subjects to their own peculiar tastes to make them shake off their usual apathy.

M. Civiale, a great authority on lithotrity, next read a paper upon certain organic *débris* sometimes met with as constituting the nucleus of vesical calculi. These were mostly hairs and teeth. In one case, that of a female, noticed by M. Civiale, these materials were, without doubt, furnished by an ovarian cyst, which had contracted adhesions with the bladder-wall, and had opened into this viscus. But in certain other cases, in which hairs alone were found, M. Civiale seemed inclined to think that these had been detached from the pubes, and had travelled along the meatus up into the bladder.

I see in your last issue a reference to M. Lafosse's case of supposed vaccine inoculation from a grease pustule. The testimony of M. Rénaud, a veterinary surgeon and member of the Academy, was given on the 26th ult., and seems to be worthy of attention, as M. Rénaud went himself to Toulouse in order personally to investigate the alleged discoveries of M. Lafosse; and he expresses himself as positive that the disease whence the virus was obtained was not the grease (*Gallicé*, "ozojambes"), but a disease perfectly distinct from it. It appears, however, that M. Rénaud arrived at Toulouse a day after the fair, and when the horse which furnished the virus was in a state of convalescence, and the traces of the disease much fainter and less recognisable in consequence.

M. Nonat showed me the other day, in his wards at the Charité a well-marked case of what he terms "luxation" of the kidney, and of which he has met with some dozen or more examples in the course of his long hospital and private practice. The patient was a woman of fifty; who had never suffered from any disease or discomfort whatever in connexion with the urinary apparatus; and the kidney, although out of place, seemed as much up to its work as when in its usual lodgings, its functions not being in any way affected by its erratic mode of life. The organ could be chased over the abdomen at will within a certain range of tether. Its favorite seat seemed to be the right hypochondrium, in front of the liver; there it could be grasped, and its contour easily made out. It might then be pushed down towards the epigastrium, and so on through all the right side of the abdomen. Occasionally it was lost, ducking probably amongst the coils of intestine, where it would remain for some time. The most curious parts of these vagabond kidney cases is the absence of all perturbation in the special function of the organ. I do not know if this be invariably the case.

I have seen several cases of purpura treated by the perchloride of iron, and can recommend it very strongly. Its action is surprisingly prompt, and apparently certain, as it has failed in none of the occasions when I witnessed its exhibiton. Fifteen grains during the day is the usual dose.

Paris, July, 1860.

THE BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

ANNUAL MEETING HELD AT OXFORD,

June 27th to July 4th.

The meeting of the Association this year, although no so numerously attended as last year at Aberdeen, was, nevertheless graced by the presence of a number of individuals distinguished for their scientific attainments, from various parts of Britain and foreign countries. Considering the proximity of Oxford to the metropolis, the number of persons from London was not so large as was anticipated, which, no doubt, was attributable, to some extent, to the early period at which the meeting was held.

The business of the Association commenced by the Prince Consort taking the chair at the general meeting held in the Sheldonian Theatre, and, after some remarks, resigning it in favor of Lord Wrottesley, who delivered the opening address, in which the progress of Astronomy occupied a considerable part of his attention.

The meetings of most of the different sections were held in the new University Museum, and here also the *soirées* were given. This Museum is, without exception, one of the most magnificent things of the kind in the kingdom, and already a sum of nearly £100,000 has been expended upon what the President calls "that splendid monument of Oxford's good-will to science." When it shall receive its various collections, illustrating every branch of natural science, it will probably form altogether a sight not to be surpassed, for the reason that its entire contents will be seen almost at one view. It may almost be called a small Crystal Palace, the chaste Gothic roof being composed of glass, whilst its walls and numerous corridors are built of stone, marble, and variegated brick.

Of the large number of communications brought before the different sections, many were of great value and importance. We can only, however, present a mere summary of those papers especially relating to medical subjects, in which Physiology and its allied sciences occupied a prominent place.

The sub-section of Physiology was opened by a most eloquent address from Dr. Rolleston, the new Linacre Professor of Physiology in the University. It abounded in matter connected with this branch of study, contained many classical quotations from ancient writers, and referred to many of their views.

Professor Carus, of Leipsic, read a paper on the Lepticephalidæ (a species of fishes), in which their anatomy and systematic position were considered. From the researches he had made, he clearly proved that these animals are merely the larval forms of other fishes, and that they should be erased from the position they have hitherto occupied. They are not destitute of a spleen, although it is difficult to find, being not larger than a small pin's head. They possess no ribs, but merely fibrous filaments; there is not a trace of generative organs to be met with, and the skin is entirely destitute of scales. An animated discussion ensued, in which Professor Huxley and others agreed in the views of the author.

A paper was then read by Dr. Edward Smith, in which the Action of Tea and that of Alcohol were contrasted, embodying the results of various researches he had made on the subject. He proved that the consumption of tea is increasing in all parts of the world, that it is beneficial and nutritive, and that the consumption of alcohol is decreasing. He gave the effects of each on the system, and showed the difference between the two; also the conditions in which tea was applicable and inapplicable. He showed the essential differences between the effects of coffee and of tea on the system, and all the highly interesting experiments referred to were chiefly performed upon himself and another person. An animated discussion took place, in the course of which Mr. W. Milner, surgeon to the Wakefield Prison, detailed a series of experiments, made with permission on the prisoners, concerning the use of tea and other substances. His observations went to prove the correctness of Dr. Smith's statement, that tea does diminish the weight of the body, unless given with solid food. Dr. Smith asserts that the use of tea increases the waste of the tissues.

A paper by Sir Charles Grey on Asiatic Cholera was read by the Secretary, in which the question was submitted whether diluted nitro-muriatic acid applied externally would not be a suitable remedy for the disease, introducing chlorine in this way more readily into the blood, and more speedily exerting its influence upon that fluid than calomel. Sir Charles is not a medical man, although he has seen much cholera abroad.

Mr. Gardner read a paper on Certain Alterations in the Medulla Oblongata in Cases of Paralysis. The author showed that atrophy of the columns of the medulla oblongata, in cases of continued paralysis, is not rare; and touched upon the probability of an arrangement in the spinal cord by which the separate action of the extensor and flexor muscles in tetanus, &c., is caused. He illustrated the intimate connexion of the olivary bodies with the posterior part of the medulla oblongata by tearing it down longitudinally, when they will always be drawn out backwards with that part. The author connected the olivaries with speech and respiration. The paper also described the varied insertion of the optic and olfactory nerves into various parts of the encephalon, according as they were associated with the intellectual or locomotive functions. He did not believe in any distinct separation of the upper and lower columns in the invertebrata

A novel and striking discovery was brought before the Zoological Section, by Mr. J. O. Westwood, on the existence of a Lepidopterous Parasite in the *Fulgora Candelaria*. This latter is a luminous insect well known in Eastern Asia and China. The surface of its body secretes an abundance of white wax, which forms the food of numerous parasites, and in which they change into pupæ, and subsequently a perfect lepidopterous insect. Specimens of both were shown, and much interest was manifested in the discovery. Although the fact is well known that many insects are infected by parasites, yet here would seem to be a wonderful provision of Nature, in one insect secreting a certain substance to form both the food and bed of another.

Dr. Lewis exhibited a new Hydrospirometer, which would answer where extreme accuracy was not required. Its cost would not exceed 15*s*.

On the Development of Buccinum, by Mr. John Lubbock, and on the Development of Pyrosoma, by Professor Huxley, were two papers which elicited a lengthy discussion on what were some interesting discoveries in relation to these genera of animals.

Contributions to the Theory of Cardiac Inhibition, formed the subject of a communication from Dr. Michael Foster. A series of experiments were detailed, illustrating the action of various degrees of intensity of the galvanic current upon the contraction of the heart, through the agency of the pneumo-gastric nerves. These experiments were chiefly confined to the snail, but the crab and other animals were likewise operated upon, with results proving the inhibitory action of the heart.

"An Experimental Inquiry into the Mode of Death produced by Aconite," by Dr. E. R. Harvey, was next read. The author's experiments, which were performed on dogs, rabbits, and frogs, went to prove that aconite acts first on the nerves and then on the muscles, killing by its action on the heart; the blood and urine were found normal. Fleming's tincture was the preparation used. Amongst the various speakers was Sir Benjamin Brodie, who referred to his own experiments made many years back, in which he had used the expressed juice of aconite. It acted as a narcotic, and arrested respiration firstly; and he had no doubt that, if artificial respiration had been tried, the animal would have recovered, as in cases of poisoning by woorara. It seemed to him not improbable that different preparations of aconite produce various effects. Dr. Sharpey observed that, in some former experiments he had made with aconite, he obtained the same results as Dr. Harvey—namely the action of the heart was stopped, and the irritability of the muscles was extinguished; the nerves, also, leading to the affected muscles were deprived of their excitability.

The subject of Chloroform was brought before the Physiological Section, in a paper sent by Dr. Charles Kidd "On the Nature of Death by Chloroform." The author considered death to be the result of reflex-action through the lungs, and not from cardiac syncope, as was supposed. He had tabulated 100 deaths from chloroform, and 25 from ether, in which it was shown, in regard to the former, that the fatal result had taken place chiefly from small doses *before* anæsthesia was established, and curiously enough, when it was given for the most trivial operations, such as the removal of toe-nails &c. Amongst a number of speakers who took part in the discussion on this paper, none seemed to agree as to the exact cause of death; that, Mr. Busk said, had yet to be determined by further experience. Some accidental circumstance was looked upon as a cause, in which shock had much to do. Dr. Priestly related an instance in which the heart continued to beat for some time after respiration had ceased, thus favoring Dr. Kidd's views. Dr. Rolleston, Mr. Busk, Dr. Graily Hewitt, Professor Corbett and others, took part in the discussion.

The subject of Deodorization of Sewage was brought before the Chemical Section by Dr. Bird.

The value of Systematized Exercise on the Expansion of the Chest was satisfactorily proved by Mr. Archibald M'Laren, in a communication made to the Physiological Section. He has a gymnasium in connexion with the University, and by systematized exercise has obtained two inches increase of expansion of the chest in every freshman three months after his arrival at Oxford.

The minute structure of the Lepadidæ, a variety of the barnacle tribe, which infests the bottoms of ships, was investigated by Mr. Garner, and many new facts about these animals were announced, particularly the discovery of true eyes.

Dr. Gibb read an interesting paper on Saccharine Fermentation within the Female Breast, and its Influence on the Child. He showed that from various causes of a constitutional nature, in which the nervous system played an important part, the saccharine element of the milk underwent fermentation at the moment of its secretion, and gave rise to the generation of two species of animalcules—namely, vibriones and monads. The milk containing these was usually rich in sugar, but, owing to the fact of its having undergone fermentation within the gland itself, its healthy character was destroyed, and it was not therefore capable of assimilation within the stomach of the infant, as evidenced by the most extreme degree of emaciation—in fact, the child was undergoing starvation. The animalcules were developed within the breasts. The author had proved the correctness of his views in a series of experiments and researches into this question since 1854. In the discussion which ensued, much credit was given to the author for his labors in this novel field of inquiry: and numerous questions were put to him in relation to the condition of the blood and other fluids, in such conditions as he had described.

Professor Corbett read a paper on the Deglutition of Alimentary Fluids, in which he attempted to prove that the epiglottis did not always fall back upon the glottis during the swallowing of fluids. This was denied by some of the speakers, who thought it always did occur.

One of the most valuable papers of the Physiological Section was an elaborate one from Mr. Arthur E. Durham, being an experimental inquiry into the Nature of Sleep. He described the appearances of the brains of animals, as evidenced through openings made in their skulls, and supported by a process of ingenious reasoning his hypothesis upon this most important subject. Mr. Durham stated that during sleep the brain was pale, and comparatively bloodless; that during functional activity the pia mater and brain substance were highly injected, and full of rapidly-moving blood. He suggested that the increased amount of oxygenated blood coursing through the vessels during wakefulness was the cause of the functional activity of the brain, and that the opposite state of the circulation gave rise to the cerebral inactivity of sleep. The state of sleep was accurately distinguishable from that occurring in all varieties of coma. Mr. Durham's views were ably supported by Professor Draper, of New York, but dissented from by Dr. Beale.

Dr. R. M'Donell considered the subject of Sugar and Amyloid Substance in the Animal Economy, and detailed a number of experiments.

M. Ollier, of Lyons, exhibited a series of specimens illustrating the Artificial Production of Bone and Osseous Grafts. His observations were wholly in French, and a portion of the discussion was in the same language. In one specimen the radius had been wholly removed, leaving the periosteum entire, and the bone was reproduced. In a similar experiment, with the removal of the periosteum as well, there was no regeneration of bone. He transplanted portions of periosteum round the muscles of the thigh, and they secreted bone. This was done in the form of strips twisted round, and they secreted bone of a spiral shape. In fact, any form of bony secretion can be obtained almost at the fancy of the experimenter. M. Ollier transplanted portions of periosteum from one part of the body to another, beneath the skin of the head and elsewhere, and not in contact with bone, and obtained bony secretions from them. This could also be obtained by transplanting this membrane from one animal to another. He transplanted entire bones and portions of bones with their proper membranes, and they retained their vitality; if the membranes were removed in these experiments, the bones died, and suppuration ensued. All these osseous secretions possessed the true and normal characters of bone. The specimens clearly proved all the author advanced, and it would seem that the periosteum is the true secreting membrane of bone, and that it can be grafted in a manner similar to that of plants, and will, as it were, take root and grow.

Dr. Radcliffe showed a number of experiments on Muscular Action in an electrical point of view. These were on the limbs of frogs, and were made with the aid of an electric battery.

Dr. Beale demonstrated, by a series of preparations and diagrams, how every elementary Fibre of Striped Muscle was abundantly supplied with Nerves. He believes that every single fibre receives one or more nervous fibres, which will be found hereafter to account for complicated muscular movements. Whereever these minute nerves are distributed are found little oval bodies, which are the means of communication between the muscular and nervous fibres. These nerves are found to be more numerous in some muscles than in others,—the tongue and diaphragm, for example,—and are surrounded by multitudes of these oval bodies. The nervous fibres are constantly undergoing decay and being reproduced. Dr. Beale's discovery is one of considerable value in physiology, and much importance was attached to it by the Association.

The Cancer Quackery; Death of the Rev. H. E. Head.—The Rev. H. E. Head, who, it will be remembered, wrote to *The Times* a few months ago, announcing that he was either cured or in a fair way of being cured of cancer in the palate by the Rev. Mr. Reed, has recently died of that disease under the immediate care of this person. Our professional readers need not be reminded that we at the time described the "cure" as delusive. The history of this case is but one of a multitude of illustrations proving the reckless audacity of ignorant pretenders to medical skill, and the fatuous confidence of a portion of the public.

Obituary.

THE LATE PROFESSOR JOHN LIZARS.

When a man of note passes from amongst us, it is interesting as well as instructive, by a retrospective glance at the salient points in his professional career, to see how he has built up the great name which he leaves behind.

John Lizars was born in Edinburgh, and received his education at the High School of that city. Having resolved to enter the medical profession, he had the good fortune to become the pupil and apprentice of the well-known John Bell, the elder brother of the illustrious Sir Charles. Under a master so eminent at once as an anatomist and surgeon, it need not be wondered at that young Lizars acquired that bent towards anatomy and surgery which determined his after-career. Having obtained his diploma in 1808, he passed several years as surgeon in the royal navy, serving on the Spanish and Portuguese coasts during the Peninsular war, under the command of Admiral Lord Exmouth. One of the warmest and most lasting friendships of his life was one which he then formed with Lord Napier, who was then captain of one of the ships in which he served.

Mr. Lizars returned to Edinburgh in 1815, and was admitted a Fellow of the Royal College of Surgeons of that city; and in such esteem was he held by his former master, John Bell, that he was admitted into the partnership which then subsisted between Bell and Robert Allan, the well-known surgeon of that day, and author of "Allan's Surgery." Mr. Lizars shortly began to lecture in the school with Allan, the latter giving the surgical lectures, while Lizars took the department of anatomy and physiology. In a few years the partnership was dissolved, and Mr. Lizars lectured on anatomy alone at the Theatre, No. 1, Surgeon-square, which long maintained its reputation as a school of anatomy. Having made a position as a teacher of anatomy, in the course of four or five years he commenced to lecture on surgery also. To teach both sciences was no light matter either for mind or body. His method was as follows: first, a lecture on anatomy from eleven to twelve; secondly, a half-hour's demonstration on anatomy at one o'clock; and, thirdly, the lecture on surgery from two to three. This he did daily, Saturdays excepted; besides which, he had a large class of practical anatomy—a department the conducting of which was then a much less easy or safe matter than it now-a-days proves to us, who have merely to receive bodies under the peaceful operation of the Anatomy Act. Mr. Lizars' activity and success may be judged when we mention that on each of his three classes there was an average attendance of about one hundred and fifty students. His success as a teacher may be said to have been due not only to his ability as an anatomist and surgeon, but to the great attention he paid to his pupils in the time he spent with them, and to the zeal with which he inspired them.

When the Edinburgh College of Surgeons, leading the van in the improvement of medical education, resolved to recognise each teacher for one science only, Mr. Lizars naturally chose surgery, resigning his class of anatomy to his brother Alexander, who soon became known as a successful teacher in Edinburgh, now the well-known professor of anatomy in the University of Aberdeen. In 1831 John Lizars was appointed Professor of Surgery to the Royal College of Surgeons on the resignation of Mr. Turner, who became the first, but short lived, professor of surgery in the Edinburgh University. Mr. Lizars continued to lecture as professor of surgery till 1838–39, when he retired from the duties of the lecture-room and the hospital. The hospital appointment he had held for only some five or six years, under an unhappy regulation then in force in the Edinburgh Royal Infirmary which allowed of but short appointments. However important a more lasting hospital appointment may be, it will prove consolatory to those who, from want of friends, or jealousy, or other circumstances, have been unable to gain such an appointment, to see from Mr. Lizars' career that even a surgical reputation may be made before, and maintained after, it has ceased.

A signal proof of Mr. Lizars' industry and devotion to the science of surgery was presented in the large number of anatomical and pathological specimens which he collected from the field presented by his practical rooms and his private and hospital practice. These, with scarcely any exceptions, were prepared by himself. The anatomical museum went to his brother Alexander, with the anatomical class; and when he retired from teaching surgery in 1839, his large and truly valuable surgical museum passed into the possession of Dr. Handyside, who succeeded him as lecturer on surgery.

Mr. Lizars' reputation as a teacher was made and maintained at a time when there was no lack of competitors and contemporary lecturers of great talent and fame. Amongst these were Barclay (who was still in the field), Mackintosh, Fletcher, Argyll Robertson, Knox, John Reid, and, as colleague at the hospital, there was Liston. Liston and Lizars taught and operated side by side, rivals and yet friends, for they were too much of a kind not to respect each other. A really great man may fail to be recognised from the mere accidental presence of a greater; as we have heard an anatomist say, the gluteus medius would have been regarded as a large muscle but for the presence of the maximus. To operate in the same theatre with Liston, and before the same students, was the severest trial to which a reputation could be subjected. But neither of these eminent men threw the other into the shade. Mr. Lizars could be equalled as an operator, but could not be surpassed. He had the ease and trust brought by that thorough familiarity with anatomy which years of teaching in the dissecting-room can alone supply, and a rich endowment of that natural coolness which is to the surgeon what natural bravery is to the soldier. None who witnessed it are likely to forget the coolness and dexterity with which he performed the then laudable but anxious experiment of exposing and tying the innominate artery; no one, probably, of the large and eager audience so cool as the operator himself. It will be remembered, too, that surgery is indebted to him for the introduction of the operation of removal of the upper jaw.

Mr. Lizars also contributed to advance the sciences of anatomy and surgery by his numerous writings. Besides his lesser writings "On the Extraction of Diseased Ovaria," "On Club-foot," "On Strabismus," and "On Stricture," he published his well-known "System of Practical Surgery," and his large anatomical work, the "Anatomical Plates." The engravings in the latter work were made chiefly from original dissections, with great care, and at much expense. The work was altogether a magnificent one in its day, and had an immense sale; and although the increased facilities for dissection have rendered all such works less necessary than in former times, it is still, notwithstanding more modern competitors, a valuable work of reference for the student and the surgeon.

Retiring from the position of teacher, which he had so long and so successfully held, Mr. Lizars devoted his time to private practice, surgical and general, with occasional appearances as an author, and thus spent the last twenty years of his life. He continued these active duties till the end. He had been out as usual on the forenoon of the 20th of last month; but feeling drowsy, returned home. Symptoms of insensibility gradually supervened and increased, and without any return of consciousness he died on the following evening, thus ending a long, active, and useful career with a short illness and painless death.

It may be well, in concluding this brief notice of Mr. Lizars' career, to call the attention of the young members of the profession to the circumstance that the success and eminence which he attained he owed solely to himself. With no aids but those of his native talent and education, and his continued industry, he rose rapidly in the confidence of the profession and the public, and left behind him a lasting name amongst the great ones of surgery and of the northern metropolis. To his many pupils, now scattered over the world, the news of his death will come with that sadness with which one hears that an old and favorite teacher has passed away, breaking another of the links which bound them to the past, and to them the incidents and the names to which we have referred will stir many deep and interesting memories of bygone days.

THOMAS POYSER, Esq., F.R.C.S.

For fifty years Mr. Poyser had been the leading practitioners at Wirksworth and the adjoining district of Derbyshire. His mind was highly cultivated; and his extensive reading, added to his great experience, enabled him to bring to bear upon his profession all the known resources of our art. He had seen much and thought much, and has left valuable practical information in two ably-written papers which appeared in the *London Journal of Medicine*—"Cases and Dissections chiefly in reference to the Uncertainty of Diagnosis," and "Illustrations of the Difficulties which beset some Cases of Disease."

His kindness of heart, cheerful disposition, and warmth of friendship endeared Mr. Poyser to all who knew him; and it is no figure of speech to say that by a wide circle his loss will be long and deeply regretted. His death took place on the 11th inst., after a very brief illness.

News Items, Medical Facts, &c.

Inauguration of the Bust of the Right Hon. Sir John Packington in the Museum of Haslar Hospital.—The bust of Sir John Pakington, executed by Marochetti, and subscribed for by the Medical Office of the Navy, was placed in Haslar Museum on Tuesday last, in acknowledgment of the great service rendered to the medical department of the service during the administration of the Right Hon. Baronet as First Lord of the Admiralty. There were nearly 100 persons present, including Captain Superintendent the Hon. George Hastings, the medical and other officers of the hospital and their families, the medical officers of the Fleet, the Baron Marochetti, and the deputation, consisting of Dr. Nelson ,R.N.; Dr. Rees, Deputy Inspector General; Dr. Beith, R.N.; Dr. Dobie: and Dr. M'William. The latter gentleman delivered an able address.

The Effect of the Improvement of Firearms upon the Numbers Hit in Battle.—Marshal Saxe used to say that to kill a soldier the man's weight of lead must be expended. This saying, though strange, has been verified in modern times, with all the improvements lately introduced at the battle of Solferino. According to pretty accurate calculations, the Austrians fired 8,400,000 rounds. The loss of the French and Piedmontese is reckoned at 2000 killed and 10,000 wounded. Each soldier hit has therefore cost 700 rounds, and every man killed 4200. Now, as the mean weight of balls is an ounce, 272 pounds of lead were used to kill a man, so that the old assertion of Marshal Saxe is still true.—*Journ. des Conn. Med. Chir. et Gaz. Med. de Lyon.*

Sanitarium at Ceylon.—The "Indian Lancet" states that the Government is seriously thinking of establishing a sanitarium at Ceylon, or in some other suitable place, for troops from India. If such an arrangement could be effected in a manner consistent with the health of the men, an immense saving would be effected, since at present a large number of men are sent to England because there is no other place for them.

The Cure of Deafness.—The "Bulletin de Therapeutique" of the 30th ultimo contains a valuable article on the cure of deafness by Mdlle. Cleret. The remedy used by that lady, and which has been found very efficacious, is sulphuric ether, from four to eight drops of which are daily dropped into the ear of children, and double the quantity into the ear of adults. The manner in which Mdlle. Cleret thought of the ether is as follows [the account given in *The Times* does not harmonize with the official statements from which we draw ours]:—Mdlle. Cleret, a private teacher in humble circumstances, had been deaf for several years, and to such an extent as to prevent her following her calling, when by chance she discovered a remedy which cured her; and as her hearing improved, she thought of applying the same remedy upon two deaf and dumb children who were day scholars in her little establishment. She succeeded beyond her expectations, and forthwith devoted herself to the education of the poor little sufferers from deafness. With so much zeal and disinterestedness did she carry out her project, that the French Academy (not the Academy of Medicine, as has been stated) bestowed upon her the Montyon prize for "virtue and charity." As, however, she had sorely to struggle with the *res augusta domi*, Mdlle. Cleret wrote to the Minster of Public Institution for assistance, so as to be enabled to go on with the treatment of the poor. The minister deputed M. Behier, a physician of high standing in Paris, to make inquiries about the matter; and the latter was so struck with the results, that he required that a committee should be appointed to test Mdlle. Cleret's method. This commitee met for the first time in October, 1859, and examined, every three months, the state of the children put under treatment. These investigations were being carried on till lately, when the sudden change of fortune, and especially the attempts of a specialist to wrest her secret from her, drove the poor woman mad. And now that she has been declared incurable, the committee have been obliged to send in their report, which is satisfactory in many respects, though somewhat incomplete, from the sudden cessation of Mdlle. Cleret's labors.

The late Mr. Jacob Bell.—The "Pharmaceutical Journal" publishes a subscription list, by which we learn that more than £1800 has already been subscribed for the Jacob Bell memorial.

Treatise on the Cultivation of Indigo.—Dr. Shortt, Surgeon of Chingleput, has received a prize from Government of 800 rupees for an essay on this subject.

PRINTED AND PUBLISHED
By JAMES HERALD, 24 Ann-Street,
NEW-YORK.

THE LANCET.

Journal of Medical, Surgical and Chemical Science and Practice, Criticism, Literature and News.

MR. WAKLEY, M.P. EDITOR. J. HENRY BENNET, M.D., J. WAKLEY, Jr. SUB-EDITORS.

IN TWO VOLUMES ANNUALLY.

Vol. 2. NEW YORK, SEPTEMBER, 1860. No. 3.

Practical Clinical Remarks,

Delivered at St. Bartholomew's Hospital,

By FREDERIC C. SKEY, Esq., F.R.S.,

SURGEON TO THE HOSPITAL.

ON TETANUS.

Gentlemen,—One of the most mysterious amongst the numerous consequences of local injury is tetanus —a condition of the system that has hitherto for the most part baffled the highest efforts of human skill to arrest or cure. It cannot be denied that every case of tetanus has not proved fatal. On the contrary, cases of no ordinary severity have recovered through the instrumentality, or at least consequent on the employment, of remedies, but which presumed remedies having failed to obtain relief in other and similar cases, warrant the not unreasonable conclusion that recovery in the case or cases in question was not attributable to the agent adopted. I remember a case of tetanus treated by Mr. Abernethy in St. Bartholomew's Hospital with calomel and jalap, in doses of from one grain to five. The case was a severe one, and arose, if I recollect rightly, from a wound about the hand. The man's bowels were greatly constipated. The purgative, given every three hours in repeated doses, at length operated freely, producing several most offensive evacuations. Relief from the spasm followed, and the man recovered. Mr. Abernethy from that time henceforth in his surgical lectures recommended to his pupils the adoption of the particular agent he had himself found so successful in the above case, attributing the disease to a constipated condition of the alimentary canal. And yet tetanus is a rare affection, while constipation in every form and degree is of common occurrence. How far can the presence of a wound or other form of local injury give a specific or at least a peculiar form to the constipation consequent on it? But it is notorious that purgatives do not cure tetanus; and that they have not the confidence of the profession is obvious from the general resort to remedies of a directly opposite tendency. Indeed, it would be difficult to point at the present hour to any agent that does command professional confidence, whether sedatives, anti-spasmodics, counter-irritants, or any other therapeutic agent. Amputation of the affected limb, though occasionally resorted to with recovery, has much more frequently failed. Much was expected from the agency of chloroform. Many besides myself have proved its incompetency to any ultimate benefit. Temporary good of a very remarkable kind cannot have escaped the observation of any surgeon who has employed it freely in these distressing cases. It is something to allay spasm and its concomitant pain, to lower the pulse to nearly its natural standard, to restore the natural respiration, and to recall the ordinary expression to the distorted features. All this is done by chloroform, which, however, while it draws a temporary mask over the symptoms, allows the under-current to flow with an insidious but certain force till it reaches its crisis in death. I have elsewhere given the details of a case of tetanus, in which, under the administration of chloroform, a pulse of 130, coupled with rapid breathing, fell to the standard of health, as did the respiration, for a period of some eighteen hours, with the single interval of about half an hour, during which the administration of the agent was suspended, when the former symptoms instantly returned. Nor was the influence of the chloroform on the spasmodic condition of the affected muscles less remarkable. How conclusively do these facts point to the real nature and seat of the disease as centered in the nervous system, and prove that the circulating system is but secondarily involved! No sooner is the nervous centre sent to sleep than the disease appears as suddenly to cease. Notwithstanding this improvement, so deceptive and insidious, it is obvious that morbid actions predominate, and I doubt whether such temporary improvement, plausible and indeed marvellous as it is, can be said to indicate an arrest of the disease in however slight a degree.

A boy, aged fourteen, was brought into St. Bartholomew's Hospital, with a hand greatly mutilated by machinery. The house-surgeon decided, on consideration,—and I thought wisely decided,—to make the attempt to restore the hand. For twelve days he progressed favorably. On the thirteenth, he complained of stiffness in the back of his neck. When I saw him, at the expiration of some hours, spasm of the muscles had extended to the chest and abdomen: but none of the muscles were severely or painfully contracted. Still the signs were distinct. The boy was the subject of tetanus; and as I had never had a successful case, I was the more anxious to adopt some more promising agent than any I had hitherto employed. With this view I determined to test the efficacy of the woorara poison, which had been employed with some effect by Mr. S. Wells in three cases of tetanus. By the kindness of Mr. Savory, who had a small quantity of the fresh poison, I was enabled to obtain sufficient for the purpose. We dissolved two grains in an ounce of distilled water. The boy being placed under the influence of chloroform, I amputated the hand immediately above the wrist-joint. My intention was to have applied two drops of the solution to the wound, and, observing the consequences, to have increased the quantity applied according to the effect produced. On recovering his consciousness, it was obvious that what had been done for the boy, whether the removal of the hand or the administration of chloroform, had been in the direction of good, the pulse had fallen from 130 to 100, and the rigidity of the muscles was greatly diminished, and continued so. The pain was also reduced, and the countenance was more tranquil. He could open his mouth to an extent sufficient for the introduction of food. The rigidity of the muscles was by no means great, nor did he suffer the degree of pain usually attendant on severe cases of tetanus. It is very true that the sterno-mastoids, pectorals, abdominal muscles, and, indeed, the muscles of his trunk generally, were involved; but their contraction was comparatively slight, and certainly was unproductive of considerable pain. The use of the woorara was postponed, and I ordered the boy tincture of opium, ten minims; compound spirit of ammonia, half a drachm; brandy, half an ounce, every two hours. On the following day I found he had had a tolerably good night; his pulse had slightly risen in frequency; the rigidity of the muscles had not increased; on the contrary, it appeared somewhat lessened. His countenance was more anxious, which appeared rather attributable to mental than to bodily suffering, for he had only recently become cognizant of the removal of his hand. By two o'clock on that day, the boy had consumed four ounces of brandy, half an ounce of spirit of ammonia, and eighty drops of laudanum. Still I had no excuse for the trial of the woorara. Doubtless the boy was in a dangerous condition; but it was obvious that the condition was not attributable to the morbid contraction of the muscular system, but to something beyond it. His bowels were constipated. I ordered him calomel and jalap, castor oil, enemata of turpentine, croton oil in no insignificant doses; but I failed to obtain the desired result up to the time of his death. In other respects, the same treatment was continued. On the third and fourth days his condition was not materially changed. He took food without difficulty, as also his medicine at the required intervals. The ammonia was increased to drachm doses. On the fourth day, his pulse had increased to 135, and his countenance was more pallid. The rigidity of his muscles had not increased in any positive degree, and those of the extremities were entirely free from spasm. On the morning of the fifth day he had taken, without producing any marked effect on his system for good or for evil, about forty-eight ounces of brandy, one ounce of tincture of opium, and four ounces of spirit of ammonia. And we may form some judgment of the severity as well as the prostrating influence of the disease under which this poor boy was laboring when we consider that such an enormous power was inadequate to produce the smallest impression on his system. On the last visit I paid, except that he appeared some weaker, I cannot say that he was positively worse. He could open his mouth sufficiently wide for the introduction of nourishment, and he took food freely throughout the greater part of his illness. His pulse was a shade weaker, but not materially so. His spasms were not severe nor considerable, and assuredly they were not a source of pain. Of this the boy gave me full assurance on many occasions. On the evening of the fifth day he died. His body was not examined.

If the nature of the disease we call tetanus could be ascertained by dissection, we should have acquired this knowledge long ago; but, so far as I know, we have obtained no information by such means, except negatively, on which to found a theory, or to obtain a guide to practice. The total amount of knowledge consists in this: that at varying intervals after the occurrence of more or less violent local injury, and occasionally—but in our latitude very rarely—independently of injury, we observe rigidity of the muscular system, commencing with the muscles of the jaw and extending to the neck, trunk, and finally to the extremities, that it is accompanied by great pain in the contracted muscles, a quick pulse and respiration, and constipated bowels; and that it terminates, in from two to six or eight days in death. Such is nearly the sum total of our knowledge of tetanus, and it may be doubted whether we are even now occupied in the right path of inquiry. We fix our attention on the local spasm of the muscular frame, as though that condition of the system constituted the essence of the disease, of which it is only a symptom. We rather search for remedies that will abate spasm than for such as will attack its cause. The above case exemplifies negatively this fact. The boy died of tetanus, but not of spasm. At no period of his case was the contraction of his muscles so rigid as to cause pain of a severe character. He complained of his arm; he suffered from a sense of illness; he desired to be let alone, and not to be disturbed; his expression betokened serious illness; but he did not die from pain nor from spasm; he gradually sank from utter prostration of nervous power, which every remedy employed was incompetent to contend against. And it is by no means uncommon to observe, towards the close of life, that the most prominent symptom of the disease—namely muscular rigidity—gradually subsides, while the real disease advances towards its fatal crisis. In the whole range of disease, I do not recollect any evidence of the existence of what we term the nervous system more remarkable or more conclusive than is derived from the influence of anæsthetics in tetanus. How absolutely is the morbid influence of the nervous system on the heart and respiratory system suspended by chloroform! and how suddenly too! The pulse falls to its natural standard, the equilibrium of respiration is restored, all expression of suffering subsides under the reality of tranquil sleep. So complete is the external manifestation of health, that it would astonish a bystander, ignorant of the nature of the case, to be assured that in a few days, possibly a few hours, it would terminate in death. Suspend the remedy, remove the influence of the anæsthetic agent, and the entire train of fatal symptoms starts, as it were, into existence—the pulse rises, the respiration is quickened in proportion, and the muscular spasm, with its usually inseparable companion, pain, become again dominant. Nor do we observe that the disease, to whatever extent it may have reached, is retarded or even diminished by the treatment. On the contrary, its progress is unremitting; and both the violence of the spasm and the severity of the pain are regenerated with an increase of intensity proportioned to the duration of time during which they have been suspended by anæsthetic agency. In the above case, I was fully prepared to test the curative properties of the woorara poison, as recorded by Mr. Wells and recent French writers; but I really had no excuse for its employment. The boy did not die either from or with spasm; and I cannot persuade myself that we shall ever discover in the woorara poison a curative property capable of rousing the vital powers, already oppressed by mysterious morbid actions going on within the frame. Still, I am quite prepared to acknowledge that all reasoning, more especially on a subject so obscure as tetanus, sinks in comparison with practical observation. Other authorities may view the subject in a different light; and it will prove no small accession to our knowledge should we discover in this or in any other untried agent the power to arrest so hitherto fatal a disease as that which forms the subject of the above brief remarks.

MARRIAGES BETWEEN FIRST COUSINS.—Dr. Bermis, of Kentucky, has found that ten per cent. of the deaf and dumb, five per cent. of the blind, and fifteen per cent. of the idiots, admitted into the various charitable institutions of the United States, are the issue of marriages of first cousins. These unions are now prohibited in certain States, and especially in Kentucky.

LECTURES ON FEVERS.

BEING

The Lumleian Lectures,

DELIVERED BEFORE THE

ROYAL COLLEGE OF PHYSICIANS OF LONDON, 1858-59;

COMPRISING

A DESCRIPTION OF THE DISTINCTIVE CHARACTERS, PATHOLOGY, AND TREATMENT

OF

THE SEVERAL FORMS

OF

CONTINUED FEVER

BY

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etc. etc.

LECTURE XII.

TREATMENT OF TYPHUS FEVER.

Former Treatment by bloodletting—emetics—purgatives—cold affusion—salines and antimonials—nourishment—wine—revival of the Brownonian treatment—narcotics—management of convalescence.—Treatment of relapsing fever.—Treatment of febricula.

THE pathology of typhus differs in many important respects from that of enteric fever, in the absence more particularly of special local lesions, from which circumstance it has been considered to be the type of a blood disease. It is moreover, a much less acute or sthenic disease than its prototype (enteric fever) and consequently the treatment, though in some respects similar, differs, as we shall point out, in essential particulars. It appears, too, from the history of epidemics, that it has a much greater tendency to spontaneous cure—a fact which explains the recovery of such a large proportion of those attacked with the Irish famine fever without the aid of remedies.

When the symptoms are mild, and especially if there be no organ seriously implicated, very simple measures are sufficient for its management; confinement to bed, attention to ventilation, cooling drinks, mild aperients, and simple nourishment being all that is necessary.

But by far the larger number of cases are of a more severe character, and require the treatment to be modified accordingly. It was considered, within my recollection, an indispensable part of the early treatment of typhus to adopt a somewhat vigorous antiphlogistic plan; and, with the view of subduing the general excitement, the treatment was commenced by the abstraction of blood—an operation seldom omitted except under special circumstances—not reserved for particular cases, but adopted as a general rule, too often regardless of the stage of the disease or the condition of the patient. Of late years, however, it has been almost entirely abandoned, and in the present day is scarcely thought of as a remedy in maculated typhus. I have not ventured to abstract blood in a single instance, either in hospital or private practice, for many years past; but I can conceive that an isolated case may occur in which there is, in the early stage of the disease, so much constitutional disturbance as to justify the loss of a few ounces of blood, in order to anticipate threatened congestion in some important organ. Such cases, however, are rare and exceptional. We may, in short, consider the abstraction of blood in genuine typhus to be now almost entirely proscribed.

The same views apply to the local abstraction of blood when there is congestion in particular organs; but although blood is not to be taken, even locally, without due consideration, and unless there be evident necessity, it may, on the other hand, at times be imperative that the first threatening of undue local excitement should be checked. In doubtful cases, or when loss of blood cannot be borne, dry cupping often affords much relief, without depressing the vital powers; and this practice is especially applicable when the patient is advanced in years or when the powers are feeble.

Of evacuant remedies occasionally resorted to, I may allude to the exhibition of emetics, not with the object of recommending them, but simply to observe that, except under special circumstances, they are in the present day seldom resorted to. But if, in the early stage of typhus, there be indications of bilious derangement, such as sickness or vomiting, epigastric uneasiness, yellow coating of the tongue, with jaundiced conjunctiva, an emetic may be prescribed,—the act of vomiting being often followed by manifest improvement in the symptoms and great relief to the feelings of the patient.

Thirty years ago the employment of purgatives formed an indispensable element in the treatment of continued fever, without regard to form or type; and certainly, if we consider the freedom with which they were prescribed after the publication of the work of Dr. Hamilton, of Edinburgh, with good effects, enteric fever must at that time have been rare, if not altogether unknown. While I acted as clinical assistant to Dr. Hamilton in the Edinburgh Infirmary, I witnessed his practice, which was, on the whole, successful; but some years afterwards, when the doctrines of Broussais were promulgated, the purgative system received a check, and, though not abandoned, it was much less freely adopted. It is also very probable that the type of continued fever was at that time more acute, so that the powers were more able to sustain the repeated exhibition of purgative medicines. But in the present day their employment in typhus is restricted to the commencement of the disease, to clear the bowels of accumulated or acrid contents, while in its subsequent progress, the occasional use of a mild aperient is all that is called for. But if there be unusual excitement, which it is deemed necessary to repress, the exhibition of one or two active purgatives may be advantageously adopted.

I have already noticed the practice of cold affusion in the treatment of fever, as recommended by the late Dr. Currie, and pointed out the objection to its employment. It is now nearly superseded by the more safe plan of cold or tepid sponging, which should always, except in cases of extreme exhaustion, be effectually applied every morning, or more frequently if there be undue heat of skin. It not only abates the morbid heat, but affords great comfort to the patient, besides cleansing the skin—a matter of no small importance in the nursing ministrations of the poorer classes. The topical application of cold when the head is hot, and the face flushed, will often alone anticipate or subdue cerebral excitement, and in all such cases it forms an important and indispensable part of the treatment.

In regard to the class of remedies included under salines, they may be employed, not on the ground that they are beneficial, but that they are a harmless means of appearing to do something, for no intelligent practitioner places the slightest confidence in their utility. On this subject Dr. Graves has very pertinently observed, "that in the treatment of fever it is frequently of importance to gain time, and periods will occur in every long fever, in which there may be no direct indication for the exhibition of any powerful remedy; at the same time such is the ignorance of non-medical persons, and the anxiety of the patients' friends is so intense, that they cannot imagine how it is possible for an attentive physician to let twelve hours pass away without doing something. The mere circumstance of seeing the fever going on, is sufficient proof to them of the necessity of making renewed efforts for its removal. This, however, is very excusable, and we could not treat fever in a satisfactory manner without medicines of an expectant character, and calculated to fill up the spaces intervening between those periods when active treatment is necessary. You are not to suppose that in ordering such medicines you are acting a dishonest part, and practising a deception unworthy of your profession; on the contrary your conduct is perfectly just and proper, and though you are convinced no medicine is required, still it will be necessary to prescribe something, if you do not wish to lose the confidence of the patient and his friends. It may be said that these are mere prejudices, and above the dignity of a man of firm and consistent character; but since prejudices are intimately blended with human nature, and constitute, as it were, a part of it, is much better in many cases to submit to them, particularly when compliance does not involve a sacrifice of principle."

With this view an alkaline citrate may be prescribed, either alone in the form of julep, or if the febrile excitement be such as to require antimonial preparations, a sixth or an eighth of a grain of tartar emetic may be added; or a pill, containing two or three grains of James' powder (prepared by Newbery), and taken at intervals according to circumstances.

In some cases, in which the antimonials are less indicated, it may be sufficient that the alkaline citrate be taken in the pyrexial state, adding the antimonial during the paroxysm only. But antimonial preparations are not to be indiscriminately employed; like other remedies of potency, they should be reserved for special emergency, only, and even in such cases they should be given with caution in maculated typhus, and their effects carefully watched, so that on the first approach of exhaustion they may be at once withdrawn.

In my observations on the treatment of enteric fever, you may remember that I dwelt on the importance of the proper regulation of nourishment from the very commencement; and certainly in maculated typhus it is even more essential that the waste of tissue should be compensated by due and regular supply of properly selected food. In addition to the ordinary kinds of farinaceous aliment, a fair quantity of good beef or chicken tea—seldom less than a pint—in divided portions in the twenty-four hours, should be allowed, and instructions given to the nurse that in the night the patient be fed, once at least in four hours, with some thin farinaceous preparation, such as barley-water, groat gruel, or arrowroot, pleasantly flavored. It is well to feel our way with the animal broth at first by giving it in small quantities—two or three tablespoonsfuls—at a time, and if it disagree, and the patient complain of weight in the epigastrium, sickness, or increased feverishness, it should be withdrawn, and farinaceous food substituted for a day or two, when it may be again tried, and will probably suit better.

The medical attendant seldom escapes the importunity of friends to permit fruits to be given. It is better to be cautious in giving consent, for such articles do not always agree, and as they are unnecessary it is better to forbid their use, unless in the form of subacid drinks, such as apple or tamarind tea, a solution of preserved jelly in water, orangeade, or lemonade. While on the subject of drinks in fever, I may allude to the necessity of restricting the patient as much as possible from over distending the stomach by copious draughts of fluids—a practice which not only fails to check thirst, but often brings on gastric disturbance. Dr. Graves has very properly reminded the inexperienced practitioner that the sensation of thirst is almost entirely confined to the fauces and upper part of the pharynx, and is as much relieved by a small quantity swallowed slowly as by a larger gulped down at once.

In the progress of typhus, generally in the second week, but sometimes earlier, symptoms of exhaustion become evident, and indicate the necessity for stimulants; hence wine, or some form of alcoholic fluid, becomes one of the most important remedies in the treatment. The precise period, however, when they should be given must be regulated, not so much by the duration or stage of the fever, as by individual circumstances. Symptoms of exhaustion or sudden collapse, for example, may supervene at any period, even at the very commencement, and require stimulants to be at once administered, and in quantities which can only be regulated by their effects. The state of the circulation, as indicated by the pulse at the wrist, but still more surely by the sounds of the heart, is the usual practical index to the determination of the question. In a former lecture I drew your attention to an excellent paper on this subject by Dr. Stokes, in which it is shown that the cardiac sounds form the only certain guide for the proper administration of wine in fever. When, therefore, we find the first or systolic sound so weak and abrupt as scarcely to be distinguished from the second. (in extreme cases it is nearly annihilated,) and the pulse at the wrist beating in sympathy with the heart, soft, compressible, and rapid, there must be no hesitation in at once administering powerful stimulants, the effect on the heart's action being the guide as to the amount of either wine or brandy, while medicinal stimuli—ammonia, chloric ether, or other remedies of this class—are given in the intervals. It is especially necessary in such cases to enjoin that in the night, when the depression is generally the most marked, nourishment, and even wine, be given at proper intervals, and not to admit the too common excuse offered by the nurse for withholding them—that the invalid was in such a sound sleep that it was not deemed prudent to interrupt it. Many a patient has thus been allowed to pass into hopeless collapse, when, in all probability, by constant judicious stimulation, recovery might have taken place.

It is always necessary to watch the effects of the first few doses of wine, and if the pulse abates in frequency, becomes soft and fuller, the tongue moist, and the heat of the skin not increased; and, when there has been delirium, if the patient becomes more calm, and has intervals of sleep, we may feel sure that the wine is doing good. On the other hand, if the pulse increase in frequency and strength, the skin become hotter, and the patient restless, flushed, and excited, with throbbing of the temporal and carotid arteries, we may conclude either that wine is not suited to the case, or has been given too early, and should therefore be withdrawn. But, as a general rule, it is perhaps better to give wine a little too early than a little too late, since, if it appear to disagree, it is easy to suspend its use; but it may be very difficult to restore the vital powers if they have been allowed to remain too long unsupported.

Nor should the wine or brandy be discontinued until convalescence is fairly established; but as the symptoms for which the stimulants have been prescribed disappear, the quantity should be gradually abridged by giving smaller portions and at more distant intervals.

In regard to the amount of wine and alcoholic stimulants that may be administered in typhus, no precise rule can be laid down, as the ever-varying circumstances presented by individual cases can alone determine this. It is prudent to begin with a half an ounce or an ounce, and to repeat this amount at longer or shorter intervals, according to the effect produced. From six to twelve ounces may be considered to be an average daily allowance, but sometimes it is necessary to give two or three pints, or even more, in twenty-four hours, and, it is surprising to observe, without the slightest intoxicating effect, even when the patient has been previously unaccustomed to stimulants. Indeed in low fevers, the exhausted state of the nervous system appears to be an antidote to the effect of stimulants—in short, to create a tolerance of wine and diffusible stimulants.

The wine should always be conjoined with nourishment, in order to assist its due assimilation, though in many cases the digestive powers are so feeble that they are unable to elaborate even the lightest articles of food, and therefore the wine or brandy may be given simply diluted with water.

I have just alluded to the daily quantity of wine that it may be necessary to prescribe in typhus. and stated that no precise rules can be laid down, as the circumstances of each case must determine it. You are doubtless aware that there is a great tendency in the present day to revive the Brownonian system, which flourished for a time in the latter part of the last century, in all acute diseases, including fevers, without regard to individual peculiarities. The doctrine inculcated by some teachers with respect to inflammation is, that this process being a deranged nutrition, involving supply and waste, and the waste being considerable while the inflammatory process lasts, there must be a compensating supply; that as the supplies for the formation of the abnormal products of pus and lymph must be drawn from the blood, or from the tissues, or from both, the vital powers become exhausted, in proportion to the organic disintegration that takes place. Hence it is concluded, that the more the inflammatory process draws upon the blood, the greater will be the exhaustion of vital force, and the consequent effect upon the whole frame.

Upon this physiological theory of the phenomena of inflammation is based the overthrow of established therapeutic principles, on which the treatment has been for ages conducted. But surely even the abettors of this theoretical view must admit that the object of treatment is to anticipate or prevent those so-called destructive processes; in other words, to promote resolution by all available means. Is this to be accomplished by extravagant doses of wine and brandy, regardless of the ever-varying condition of the sufferer or period of the disease?

Similar reasoning is adduced in regard to the phenomena of fevers, whatever be their type or special circumstances. It is against the indiscriminate employments of stimulants in fever that we protest, being convinced that their proper administration requires as much consideration as is generally bestowed on other measures employed as curative agents.

The enormous quantity of wine and brandy recommended in even the early stages of fevers, whatever be the form, the individual circumstances, or whether there be local affections present, have often surprised me, and inclined me to doubt the accuracy of the statements. I have certainly seen intercurrent inflammations materially aggravated by the injudicious stimulation adopted, and on more than one occasion all the ordinary characters of acute delirium tremens supervene when the unlimited administration of brandy had been left to the discretion of a nurse, who fancied that she was only obeying instructions when she poured down dose after dose of pure brandy. There is surely no practical philosophy in such indiscriminate abuse of a really valuable remedy when given on rational principles; and I deem it the duty of every physician who is convinced of the dangerous tendency of the Brownonian doctrine applied indiscriminately in the treatment of diseases, acute as well as chronic, to express his opinion boldly and decidedly, that the young and inexperienced practitioner may be warned of the dangerous consequence of this recently-revived doctrine.

In regard to the class of wines best suited for fevers, claret often answers well, and may be employed, unless a more powerful stimulant be required. With most patients it suits well to commence with, and mixed with water is a grateful beverage. It has also the advantage of being less stimulating, and more likely to suit in cases in which the employment of wine is doubtful. The stronger wines,—port, sherry, or madeira,—properly diluted, are however, generally preferred. Brandy is often very useful, especially when a more powerful stimulant is indicated, or when wine is either not relished or disagrees. In hospital practice, for obvious reasons, alcoholic fluids—gin, whiskey, British brandy (which is merely malt spirit disguised by coloring matter)—are generally prescribed.

In the Fever Hospital, Cape wine, of the best quality, and British brandy, are used.

Malt liquors are sometimes employed; but they are suited only to the stage of convalescence. When, however, the patient has a desire for them, from having been previously accustomed to their use as an article of diet, they may be allowed in addition to wine or spirits.

It is necessary, in many cases, to calm the nervous system; and this brings me to the consideration of the exhibition of narcotics, from the judicious employment of which so much benefit is occasionally derived.

Wakefulness, or want of sleep, so common in typhus, requires the employment of opiates; for nothing is more exhausting than two or three nights passed without sleep. Of the different remedies of this class, experience has led me to give the preference to opium, or its alkaloids; but I generally succeed with a much smaller dose than is usually prescribed,—with, perhaps, ten or twelve drops of Battley's laudanum, or of the liquor morphiæ,—repeating the same quantity every two or three hours until sleep is procured. But we ought to proceed on sure grounds, and if there be undue vascular excitement, indicated by headache, acute delirium, flushing and conjunctival injection, the narcotic must be postponed until the symptoms are subdued. In my last lecture I alluded to the beneficial effects of a combination of tartar emetic and laudanum in the cerebral affections of enteric fever, and need not do more, in the present instance, than state, that it answers equally well under the same circumstances in typhus, at the same time administering, in the severer forms, which so closely resemble delirium tremens, wine or brandy in such quantities and at such intervals as the case requires.

Though opium generally acts better than any other of the narcotic class, it disagrees with some patients; and when such idiosyncrasy occurs, we must give a trial to some other remedy of the narcotic class, such as henbane, extract of poppy, or Hoffmann's anodyne liquor. Some speak highly in favor of the extract of belladonna as a narcotic when the pupil is so contracted as to be thought to contra-indicate the employment of opium; but I have no experience of it. I have often observed, however, that when patients, or those around them, have intimated that opium disagrees, if given by enema, it acts like a charm in soothing the nervous system and promoting sleep, concealing of course that opium is administered. Twenty or twenty-five drops of laudanum, added to three or four ounces of any bland fluid, is often sufficient, and is, in many cases, a preferable mode of administering an opiate.

As to the repetition of opiates, I would observe, that when the purpose for which they have been given has been accomplished, the remedy need not be repeated, unless the same circumstances recur. The remedy, however, should always be at hand to be administered if necessary.

In no disease are the beneficial effects of blisters more satisfactory than in these severe cerebral affections. But we must be careful not to apply them if there be subacute inflammation going on. When this is subdued, the blister may be applied to the forehead and the temples, which is preferable to blistering the nape of the neck, in which situation vesication is often attended with much discomfort from the constant friction to which the surface is exposed.

In the pulmonary affections to which I shortly adverted in a former lecture,—whether they assume the form of bronchitis, pneumonia, or, more rarely, of pleurisy,—special local treatment becomes necessary. But it must be remembered that not only is the local malady itself of a low or asthenic character, but the general or constitutional powers are depressed, and, consequently, active remedies not only fail in their object, but tend still further to lower the strength. Counter-irritation of the chest by turpentine stupes, or sinapisms, or the application of a blister, often gives marked relief. The secretion of the pulmonary membrane should at the same time be promoted by antimony or ipecacuan, while the general powers are sustained by wine and nourishment.

The management of the convalescent stage of typhus is not unimportant, though often neglected. Much benefit is derived from various remedies of the tonic class—quinine especially, or some bitter infusion, such as that of cascarilla, calumba, or gentian, to either of which the compound spirit of ammonia may be usefully added. The diet should be light and nutritious, and suited to the digestive powers of the patient, and it is always proper to make careful inquiry into the previous state of the assimilating powers, in order that a suitable dietetic plan may be laid down. No general rules can be given, as each case must be regulated by its own peculiarities, and if due care be observed, in eliciting these, there will be seldom great difficulty in adapting the details.

TREATMENT OF RELAPSING OR RECURRENT FEVER.

When I described the characteristic features of this comparatively rare and somewhat singular form of fever, I mentioned that it occasionally constituted the character of an entire epidemic. It more commonly appears as an intercurrent disease during the prevalence of an epidemic of either enteric or typhus fever, and requires, in some respects, special treatment.

In the epidemic which appeared in Edinburgh in 1817 and 1818, and of which a description was given by Dr. Welsh, he expressed great confidence in the efficacy of copious bloodletting, and his apparent success has furnished the chief argument employed by those who support the change-of-type theory in explanation of the altered views of the treatment of fevers. I had the opportunity of witnessing this epidemic, and the bold treatment it received at the hands of Dr. Welsh, and though it appeared, on the whole, successful, I am satisfied that it was carried to a much greater extent than the symptoms required; indeed I am almost disposed to think that the issue would have been equally successful had bloodletting not been practised at all, for succeeding practitioners have found that the loss of blood was not only unnecessary, but could not be sustained in subsequent visitations of the same fever. Dr. Cormack, for example, in the description he has given of the epidemic relapsing fever which prevailed in Edinburgh in 1843, tells us that he was urged to adopt bloodletting by several medical friends, who had seen the disease treated, in 1817, by copious bleedings, and, as it appeared to them, with the effect of shortening its duration, preventing relapse, and mitigating the muscular and arthritic pain. In the trials he made, however, he found that although in most, if not in all the instances in which bloodletting was resorted to, the pain in the head, was either relieved or entirely removed for a time, and the pulse rendered more soft and slow, these beneficial changes could not be entirely ascribed to the remedy, since the same relief was observed to take place as suddenly and unequivocally in patients in the same wards, and with the same symptoms, who were not bled at all. It was evident that few could bear the loss of more than ten ounces, and that others became giddy and faint after two or three only had been abstracted, and though some of the patients declared that they felt quite free from headache after the bleeding, it returned soon after with its former severity. Indeed, this symptom often ceased spontaneously, or, at all events, was more uniformly and effectually relieved after the full operation of a purgative, followed by the application of a cold lotion to the scalp, and immersing the feet in warm water. Even the local abstraction of blood appeared of doubtful efficacy.

In the cases that have come under my individual observation, I saw no indication for employing venesection, but I trusted to moderately free action on the bowels in the young and vigorous, though caution, even in the employment of purgatives, was necessary in patients who were advanced in years, as well as in those whose powers were feeble. The exhibition of one or two doses of calomel and rhubarb at night, followed by castor oil, or a neutral salt in the morning, so as to clear out the bowels effectually, was generally followed by relief of the symptoms, a gentle action on the bowels being afterwards maintained by mild laxatives. Free action of the bowels having been procured, there was little necessity for other remedies. Thirst was appeased by any of the common beverages ; or if it were necessary to show that the patient was not neglected, the saline alkaline julep, or a mixture containing a few grains of bicarbonate of potash in camphor water, was prescribed at intervals. The diet was restricted to farinaceous matters and beaf-tea ; in short, the ordinary treatment of mild fever was, in its routine details, adopted.

For the vomiting, so frequent in the course of the disease,—often, indeed, an early symptom in the primary fever, as well as in the relapse,—the application of a sinipism or turpentine stupe to the epigastrium, followed by a pill containing opium, camphor, and extract of nux vomica, repeated at short intervals, or creasote or prussic acid, alone or in combination, was employed. The opiate enema, or the introduction of solid opium as a suppository, also controlled this symptom.

In severe and persistent headache accompanied by pulsation in the temporal and carotid arteries, and flushing of the face, it may be necessary to relieve these symptoms by cupping and cold applications to the head. If bronchitis, pleurisy, or pneumonia supervene with unimpaired powers, the local abstraction of blood by cupping, followed by the administration of a pill containing calomel, opium, and James's powder at suitable intervals, with turpentine fomentations to the affected side, comprise the measures best adapted to the pulmonary complications.

In the cases accompanied by jaundice and hepatic or splenic dulness, the moderate exhibition of mercury is the best remedy, with the application of a blister or turpentine over the affected region. It is unnecessary to push the mercury far, so that it should be withdrawn on the first appearance of its action on the salivary glands, and the iodide of potash in a bitter infusion substituted.

Muscular and arthritic pain, when severe, often causes great irritability and want of sleep. This symptom is generally relieved by a combination of calomel, Dover's powder, and extract of colchicum, given at bedtime, and repeated, if necessary, in smaller doses during the day. In less severe cases, the iodide of potassium, especially if combined with a small quantity of colchicum, answers extremely well.

When the symptoms assume an adynamic character, indicated by rapid, weak compressible pulse, cool, clammy, jaundiced skin, bilious vomiting delirium, followed by more or less deep coma, powerful stimulants, such as ammonia and chloric ether, and the liberal administration of wine and brandy, must be perseveringly given ; while external stimulation is had recourse to by means of blisters applied to the neighborhood of the head, and over the region of the heart. The same measures must be resorted to if sudden collapse supervene, which not unfrequently happens in persons advanced in years, whose powers are inadequate to struggle against an acute disease in which so many organs essential to life are implicated. In short, the various anomalies must be treated on general principles, and in determining and carrying them out much judgment and tact may be often required.

When alluding to the nature of this form of fever, —the relapsing,—I stated my opinion that it had, in many respects, a great resemblance to the periodic class ; and from the attempts that have been made to anticipate or prevent the secondary fever by giving antiperiodic remedies, this idea must have occurred to others. With this view the cinchona bark, or its alkaloid quinine, has been given in the apyrexial period ; but though I have prescribed it myself, and seen it ordered by others, I cannot say that is has any apparent influence in preventing the relapse. It is, no doubt, useful as a general tonic, and should, therefore, form part of the treatment of the apyrexial stage ; but, certainly, no confidence should be placed in it beyond its tonic properties. Arsenic—another remedy of the antiperiodic kind—has been tried with the same object, but has equally failed in arresting the secondary fever.

It would, therefore, appear that the analogy between the relapsing and periodic fevers is confined to a certain resemblance in some of its features only ; for it appears neither to arise from the same causes or poison, nor to be influenced by those remedies which are almost invariably successful in the treatment of malarious fevers. It is equally clear that relapsing fever differs, in many respects, from either enteric or typhus fever, not only in symptoms and progress, but in its exciting causes or origin, as well as its comparative small death-rate. It is, therefore, in every respect, a disease *sui generis*, and interesting as an occasional, though by no means new, form of fever.

TREATMENT OF FEBRICULA.

This disease, which appears to include the milder forms of either enteric or typhus fever,—for I have seen no reason to consider it a distinct form of fever —runs its course in a few days without special treatment beyond confinement to bed, regulation of the bowels, and diet. But if these precautions be disregarded, it is possible that a more formidable disease may be kindled—possibly an acute local disease, requiring appropriate management. Hence the necessity of enforcing care in any form of febrile ailment, however apparently mild.

(*To be concluded.*)

ROYAL COLLEGE OF PHYSICIANS, LONDON.

Gulstonian Lectures.

FOR 1860.

ON THE THEORY AND THERAPEUTICS OF CONVULSIVE DISEASES, ESPECIALLY OF EPILEPSY.

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LECTURE III.

(Concluded from August No.)

III. The Theory of Spasm.

1. In *catalepsy*, the state is closely akin to that of a corpse. The blood, indeed, is well-nigh stagnant in the vessels; and it may be necessary to apply the ear to the chest to know for a certainty that the heart continues to beat.

In *tetanus* there is no fever. All observers are agreed upon this point. It is found also, that the spasms are apt to become more general and more violent as the pulse weakens and the animal heat departs. The bouts of spasm, moreover, are distinctly coincident with paroxysms of difficulty of breathing; and in this way the spasm would seem to be connected, not with excitement of the circulation, but with a state in which the aëration of the blood is considerably interfered with. And, in the tetanus caused by strychnia, there is certainly nothing like vascular excitement; indeed, as we have already seen, the experiments of Dr. Harley afford conclusive proof that the addition of a very minute quantity of the poison to the blood might be considered as equivalent to a loss of two thirds of the whole amount of blood, inasmuch as it diminished by two-thirds the power which the blood has of absorbing oxygen, and so becoming arterial.

During the spasms of *cholera*, the skin is frigid, clammy, and blue, the breath cold, the pulse well-nigh imperceptible; and that the coincidence of this state of collapse with the spasm is more than accidental would seem to be evident from the fact that the spasms relax *pari passu* with the reaction of recovery.

In *hydrophobia*, the state of the circulation is the very opposite of fever, as is proved by the cold hands and feet, the perspiring skin, the quick and feeble pulse, the sobbing and sighing respiration, as well as by the fact that the agitation, spasm, and convulsion increase in violence as the circulation fails. It would seem also, that this very depression of circulation must be connected with the agitation, spasm, and convulsion; for, on looking over the histories of a large number of cases, I find that there was less agitation, less spasm, less convulsion where the circulation was less depressed than usual.

In *spasmodic ergotism*, so far as we know, the pulse presents no sign of excitement throughout the whole course of the malady.

In the "early rigidity" of cerebral paralysis, there may be at first no very evident alteration in the circulation, and the heat may not fall below the normal standard; but before long, both pulse and heat fail in the paralysed parts. In "late rigidity," the local circulation is always feeble, and the heat in the part is kept up with difficulty.

In acute spinal meningitis there may be symptoms of active fever at the onset, but, if so, these symptoms very shortly lapse into those belonging to the typhoid condition. Usually, however, the symptoms have a typhoid aspect from the beginning, and the respiration is too labored and imperfect to allow of a different state of things. In acute myelitis, the circulation is utterly without power; and, as a collateral evidence of this fact, there is a marked disposition to slough in all the parts subjected to pressure. In chronic spinal meningitis, and in chronic myelitis, the state is one of hectic exhaustion.

In the different forms of minor spasm there is, for the most part, no evidence of over-action in the circulation; nor is it otherwise when the phenomena of fever are mixed up with the spasm, as in whooping-cough. For what is the fact? The fact is that the whoop, which is the audible sign of the spasm, does not make its appearance until the febrile or catarrhal stage has passed off; that it disappears if pneumonia, bronchitis, or any other other inflammation be developed in the course of the malady; and that it returns again when the inflammation has departed. In this case also, as in laryngismus stridulus, the way in which the spasm is mixed up with the phenomena of partial suffocation is an argument that the blood is imperfectly arterialized during the spasm.

2. In the more severe forms of the disorders which are characterized by spasm, the mental state is indicative of exhaustion, prostration, or inaction. In catalepsy, the mind is in a deep sleep, or else lost in some dreamy vision. In tetanus, the patient is alarmed, absorbed in his sufferings, agitated. The cramps of cholera are attended by indifference to the future and utter hopelessness, than which there can be no surer sign of utter mental prostration. In hydrophobia, everything denotes the want of mental energy, for the state is an exaggeration of delirium tremens. In ergotism, the mental state borders closely upon fatuity. In both forms of the rigidity of cerebral paralysis, early as well as late, the brain has been seriously damaged by white softening, by apoplectic effusion, by red-softening, or in some other way, and the mental power has suffered accordingly. Nor is the case different in other forms of spasm.

The state of mind, indeed, is what it might be expected to be from the depressed state of the circulation; and the depressed state of the circulation (to use once more the argument used on so many previous occasions) is one which necessitates, as it would seem, a corresponding state of inaction, not only in the brain, but in the medulla oblongata, the spinal cord, and in all other parts of the nervous system. Nor do there appear to be any objections to this view in the background.

The traces of inflammation which are occasionally met with in the brain or spinal cord of persons dying of tetanus need be no such objection. It is evident that inflammation of these organs or their coverings is not an essential condition of the disease, for in the majority of cases—as in those occurring in Guy's Hospital since 1825—there was not the slightest trace of such a lesion. Nay, it may even be said that the inflammation, where present, had served to mitigate or antagonize the tetanic contractions; for it is certain that these contractions may be developed in their most violent and perfect form where inflammation is most unequivocally absent, and that the contractions may be absent where (as in many cases of inflammation of the cord or its membranes resulting from accident) inflammation is most unequivocally present.

In hydrophobia, also, as in tetanus, the cases in which traces of cerebro-spinal inflammation are not found after death are, to say the least, quite as numerous as the cases in which they are found; and hence it is equally impossible to suppose that such inflammation is essential to the malady. It must be understood, also, that the traces of inflammation in hydrophobia are met with almost anywhere and everywhere; and thus it may be conjectured, with no small share of reason, that the inflammation in this malady is in reality a depurative process by which the system strives to rid itself of the virus, and that traces of inflammation are not usually found because death has happened before there had been time for the development of them. This vagueness in the seat of the traces of inflammation is well seen in a careful analysis of forty-six cases of hydrophobia by my brother, Mr. Radcliffe, of Guildford-street.

And certainly it is not easy to suppose that inflammation of the spinal cord or its membranes is necessarily concerned in the production of spasm. On the contrary, it may be held that the inflammation has antagonized or mitigated the spasm. For if violent and general tetanic symptoms may be developed in cases where the spinal cord is altogether untouched by inflammation, as in many cases of tetanus; and if, as is certainly the case, the tetanic symptoms are comparatively slight and confined to the back and neck, where the spinal cord is actually and unmistakably inflamed, is it not fair to suppose that the inflammation has had the effect of antagonizing or mitigating the spasm?

As in the different varieties of tremor and convulsion, therefore, so in the different varieties of spasm, the facts would seem to be altogether at variance with the idea that the muscles are provoked to excessive contraction by excessive stimulation of any kind. The facts, it would seem, are at complete variance with this idea, and in as complete harmony with that theory of muscular motion which was propounded in the first lecture. It would seem, in short, that the key to the pathology is supplied by the physiology, and that the physiology is confirmed and established by the pathology. It is the same story throughout.

II.—The Therapeutics of Convulsive Diseases.

Arguing from the physiological and pathological premises, it may be inferred that the fact of tremor, or convulsion, or spasm, can, in no single instance, be urged as a plea for the adoption of "lowering measures." It may be inferred, indeed, that the great desideratum in every convulsive affection is a more vigorous circulation and a purer blood, and that the remedies to be sought after will be those which bring about these changes.

1. I know of no facts which show that a low diet is beneficial in epilepsy. On the contrary, I know of many instances where the patient has been undoubtedly benefited by the abandonment of such a diet. The meals, of course, must always be regulated so as to guard the stomach from an overload of food; but of the two evils, abstinence is more to be dreaded than repletion. It would seem, indeed, as if the stomach of a confirmed epileptic can never be allowed to remain entirely empty, without some risk of an attack. As a rule, also, stimulants, of one kind or another, would seem to be very serviceable. In some cases, it is true, malt liquors may be objectionable; but in these cases it will generally be found that unquestionable good will result from a proper allowance of sherry, weak brandy-and-water, or, better still, of claret. Indeed, I am satisfied that epileptics, and nervous patients generally, will have good reason to overlook the shortcomings of the recent treaty by which, at reasonable rates, they will be able to substitute the light wines of France for the fiery wines of Spain and Portugal, and the strong ales of our own breweries. Coffee, also, would seem to be a more suitable beverage than its less stimulating companion, tea, particularly at an early period of the day.

It is, no doubt, of extreme importance to prevent the accumulation of effete matters in the bowels, and to remove such accumulation when it has taken place; but whether purgatives are the proper remedies is not quite so certain. If the bowels do not act with sufficient regularity, there is, in all probability, some error in the diet—some excess of animal food, some deficiency of culinary vegetables and fruit; and the first thing to be done is, obviously, to correct this error. And this is often all that is wanted, if care be taken to explain to the patient that his bowels can act without purgatives, and that he need not—particularly if advanced or advancing in life—be altogether cast down if now and then they do not act every day. Indeed, if the diet be properly regulated, and this explanation made, the patient will generally have the satisfaction of finding his tongue clean, when he remembers to look at it, and of forgetting his stomach and bowels altogether.

Or if the result be not quite so satisfactory, an occasional injection of cold water or brine, on getting up in the morning, will rarely fail to set matters right, and that without disturbing the digestion in any way, or producing disagreeable of feelings depression or irritability.

As to the rest, it appears to be advisable to order the habits in such a way as to save the strength as much as possible. Proper exercise is, of course, necessary; gymnastic exercises, by which the chest is expanded, and the respiratory capacity increased, are valuable adjuvants; but it is no less certain that muscular exertion upon or beyond the verge of fatigue must be looked upon as a common cause of the epileptic attack. As a rule, also, it would seem that epileptics require more than the average amount of sleep, to enable them to recover from the multifarious fatigues of the day and night.

The more strictly medical part of the treatment of epilepsy is a subject of no small difficulty. The treatment of the present day is very different from what it was when almost all disorders were referred to inflammation or over-action of one kind or other. Practically the lancet is now abandoned, and leeches are in a fair way of being left undisturbed in their swampy homes; practically, also, it has ceased to be the habit to distress the stomach and bowels by the frequent use of strong purgatives or emetics; and this change may be appealed to as an argument that "lowering measures" had disappointed the hopes of those who had tried them so long and so patiently, and who gave them up so unwillingly. Be this as it may, a great change has come over the treatment of epilepsy, and the remedies at present most in vogue in this country are certain preparations of zinc, copper, and silver, particularly the oxide of zinc, and the ammonio-sulphate of copper.

The present fancy for oxide of zinc has been caught from M. Herpin, who has devoted a substantial volume to the purpose of showing that many cases of epilepsy may be cured by the vigorous and persevering use of this remedy. In this work, M. Herpin relates thirty-eight cases of epilepsy or epileptiform disease, in nearly all of which he gave the oxide of zinc; but, as I have elsewhere shown, the favorable opinion of this physician as to the virtue of this medicine is by no means borne out by an analysis of those cases. It would appear, moreover, that M. Herpin himself has become less confident than he was in 1852, when he wrote the work in question, for a more recent statement is, "que l'oxyde de zinc, ne cessant point d'être convenable pour les enfans et les vieillards, échoue très souvent chez les adults." M. Delasiauve, who quotes these words, tells us that one reason for this change of opinion was the absolute failure of an experiment in the Bicêtre, in which one of the physicians of the establishment, M. Moreau, treated eleven adult epileptics in every particular after M. Herpin's method. M. Delasiauve also tells us that M. Herpin now gives the preference to the ammonio-sulphate of copper in the treatment of adults. I might argue, also, that his faith is even shaken in this remedy, for I have recently had more than one patient, who had previously been under him, in whose case he abandoned the copper after a very short trial, and trusted to a vegetable simple, of which I shall have to speak presently. Nor can I speak favorably as to the results of the trials, nine in number, in which I gave oxide of zinc after M. Herpin's method; and my experience in this respect agrees fully with that of my friend and colleague Dr. Marcet, who, more perhaps than any other man in this country, has put this mode of treatment to the test of experience. At the same time, it does not follow that zinc is of no value in epilepsy. On the contrary, the probability is, that it is a remedy of considerable value in the proper case and in moderate dose; and this opinion is not a little supported by the beneficial results which Dr. Marcet has recently found to attend its use in many forms of nervous excitability. Of the other preparations of zinc it is not necessary to speak, for there is every reason to believe that their action for good or evil is analogous to that of the oxide.

It is not easy to obtain any sound evidence of the value of the ammonio-sulphate of copper in epilepsy. Speaking of the cases recorded in his published work, M. Herpin says that, including relapses, he obtained fourteen cures in eighteen patients; but when these cures are fairly analyzed, they do not turn out to be a whit more satisfactory than those which he ascribes to the oxide of zinc. Nor do I know of anything thoroughly satisfactory in the experience of others. For myself I ought scarcely, perhaps, to express an opinion, for I have never given the medicine a fair trial; but I have met with several patients who have taken it, under the advice of other physicians, and of these I have no hesitation in saying, that not a few, on being asked how they were affected, have said that they felt more nervous while taking it, and that no beneficial change was produced in the fits.

With respect to nitrate of silver little need be said. I have had three patients under my care whose skin, before they saw me, had been tinged of a dismal grey color, and whose fits had been worse, rather than better, during the time they were taking the silver; and many cases are on record which show that this evil may happen without any countervailing good.

"Of all the metallic remedies," says Dr. Watson, "I should prefer some preparation of zinc or iron;" and I believe there are signs of change of opinion in the minds of many thoughtful men, and that before long iron may be placed before zinc, and not after it. If, as has been said, the inferences from the premises is that the desideratum in epilepsy is a more vigorous circulation and a purer blood, it is to be expected that iron may not unfrequently be wanted; and this expectation is not belied by my own experience. At the same time I must confess that there are many cases in which this remedy fails to bring about any beneficial result, and where harm rather than good may be said to attend its use.

In many cases, also, another common remedy, which is not mentioned in Dr. Watson's chapter on epilepsy, and which is also overlooked by almost every other author, would seem to do good. This is quinine. But with this remedy, as with iron, it must also be confessed that there are other cases in which, to say the least, the good done is not unequivocal.

In a word, it is exceedingly difficult, in the present state of our knowledge, to decide as to the value of these remedies in epilepsy; but that zinc is no specific, and that the common tonics mentioned are not of themselves sufficient, must, I doubt not, be the confession of every one who has had sufficient experience in the matter.

Where, then, must we turn for what is wanting? Is it to remedies of a directly stimulating character? Is it to remedies which may be supposed to purify the blood from certain matters which ought to be excreted, but which being retained produce a depressed or oppressed state of the circulation?

"If," says Dr. Watson, "I were called upon to name any single drug from which, in ordinary cases of epilepsy, I should most hope for relief, I should say it was the oil of turpentine. And I find that other physicians have come to the same conclusion. Dr. Latham the elder was, I believe, the first person who made known its efficacy in this disorder. Foville states that he has seen excellent effects from it. It is highly spoken of by Dr. Perceval in the 'Dublin Hospital Reports.' It is not given in large doses, but in smaller ones frequently repeated; from half a drachm every six hours." And that turpentine is a valuable remedy in epilepsy, very valuable, I have no doubt whatever.

Another remedy which puts in its claim for approval is valerian. This is a very favorite remedy, both in this country and elsewhere, and its claims, though not equal to those of turpentine, appear to be in every way deserving of attention. Recommended by Aretæus and Dioscorides, and in use ever since, it was never other than a favorite remedy. Now the prominent action of valerian is that of a stimulant—an action depending upon the presence of a composite volatile oil, of which one tion is a volatile acid, capable of forming a salt with bases, and known under the name of valerianic acid; and it is a natural question, after what we know of turpentine, whether the stimulating action of the drug does not show that it may be efficacious, and explain the secret of its efficacy.

It is somewhat significant also, that the *selinum palustre* is one of the four principal remedies to which M. Herpin has pinned his faith; and not only so, but the one to which he gives precedence. These four remedies, ranked in the position belonging to them in an *ordre de mérite*, are—selinum palustre, ammonio-sulphate of copper, oxide of zinc, and valerian. Now, selinum palustre is an unbelliferous plant, of which several grammes may be taken at once,; and, on questioning three or four patients who have taken it, the answer was that they were warmed and comforted by it. In other words, its action would seem to be that of a feeble stimulant.

Under these circumstances, therefore,—believing that a more active state of the circulation is a desideratum in epilepsy, and having these practical arguments in favor of turpentine and valerian,—a sufficiently natural question was whether camphor, naphtha, or ether in its various forms, or any of the stimulant gum-resins, or musk, or castor, or some other stimulant would be of use in epilepsy. Nor, if I can read aright the lessons of my own experience, is the answer different from what might be expected.

That camphor is often a very valuable remedy in epilepsy I have no doubt in my own mind. In doses of about three grains, twice or thrice a day, for a time, I have seen such results as to justify me in ascribing to camphor all the virtues belonging to turpentine, with this addition in its favor—that it is not unpleasant to the taste, and that it exercises, or seems to exercise, a directly quieting influence over the generative and urinary organs.

Naphtha also would seem to have the advantages without the disadvantages, of turpentine. In doses of from half a drachm to a drachm, and taken for some time, I have often had what seemed to me unequivocal evidence of its beneficial action. As a rule, also, a patient soon becomes indifferent to the taste, particularly if it has been redistilled more than once.

Of the stimulant gum-resin, my experience is not very ample; but I think I have seen enough to satisfy myself that, in several cases, they are of considerable value. Of musk and castor I have no experience.

With respect to the different forms of ether, Hoffman's anodyne, chloric ether, spirits of nitric ether, and so on, there can, I think, be no doubt as to their great value as occasional remedies; and the same may be said of ammonia. In the majority of instances, it is only to this class of remedies we can trust for warding off a fit. In some cases, also, ammonia would seem to be of much use as an alkali in a point of view of which we have now to speak. But however beneficial stimulants may be, it is necessary to confess that they will not do all that is wanted. It would appear, indeed, as if something were wanted which will carry out the second indication, and ensure—what has been spoken of as—a purer condition of the blood. Nor are we here altogether in the dark.

"About fourteen months ago," wrote Sir Charles Locock in 1853, "I was applied to by the parents of a lady who had had hysterical epilepsy for nine years, and had tried all the remedies that could be thought of by various medical men (myself amongst the number) without effect. This patient began to take *bromide of potassium* last March twelvemonth, having just passed one of her menstrual periods, in which she had two attacks. She took ten grains three times a day for three months; then the same dose for a fortnight previous to each menstrual period; and for the last three or four months she has taken them for only a week before menstruation. The result has been that she has not had an attack during the whole of the period. I have also tried the remedy in fourteen or fifteen cases, and it has only failed in one, and in that one the patient had fits not only at the times of menstruation, but also in the intervals."

In using bromide of potassium in these cases, Sir

Charles Locock's object was to calm an erotic disposition, which attended and aggravated the epileptic symptoms, and this end may have been, and in all probability was answered. But this is certainly not the only way in which this remedy acts beneficially. On the contrary, after trying it in scores of cases during the last two years, I can testify that bromide of potassium is a very valuable remedy in cases where there is not the slightest sign of an erotic disposition. I can testify, indeed, that this remedy has proved more or less serviceable in cases the most dissimilar in character—so serviceable that the name of Sir Charles Locock ought always to be remembered with gratitude by every epileptic, and by many suffering from other kinds of convulsive disorder. How to explain the *modus operandi* of this medicine is no very easy matter; but I am inclined to think that this in part at least, is by an alterative action upon the blood analogous to that produced by iodide of potassium and common salt—an action by which, possibly, the blood may be kept free from compounds analogous to uric acid. And this I do, because for a long time I have found decided benefit from occasional doses of a mixture containing bicarbonate of potass and iodide of potassium, with or without a drop or two of tincture of colchicum or wine of white hellebore. At any rate, the alkaline character of the compound would seem to be necessary in some cases; for on looking over about thirty cases in which I tried bromide of iron, as well as bromide of potassium, I find that in the majority the latter preparation had a more beneficial action than the former.

At any rate there can be no doubt that a healthy action of the kidney, and of every organ by which the blood is kept in a state of purity, is essential to the successful treatment of epilepsy.

But, it may be asked, what is to be said of the thousand specifics which have been recommended from time to time? What, amongst others of strychnia, belladonna, conium, cotyledon, umbilicus, poudre de Neuchâtel, tracheotomy, and cauterizations?

Strychnia, as all know, was a favorite remedy with the late Dr. Marshall Hall; but the dose was attenuated to such a degree as to render it somewhat difficult to believe that much good came of it. Dr. Hall, indeed, distinctly allowed that harm is done if the dose be sufficient to produce the physiological effects of the drug.

Belladonna—a remedy recommended by Stoerk, and used some years afterwards by MM. Debreyne and Bretonneau—has been again brought into notice by M. Trousseau, who says he has employed this remedy for twelve years, and always had under treatment from eight to ten patients. He says, further, that of 150 persons so treated, 20 have been cured, or, at any rate, that their fits have not returned; and that M. Blacke, who employed it during the same period in a large private practice, has met with a like proportion of successes and failures. It is a fair question, however, whether 13 per cent. of successes (which may, possibly, in part at least, be explained in a different way) can be regarded as sufficiently conclusive evidence in favor of the remedy; and this the more, as other practitioners, M. Delasiauve amongst the number, have been less successful. Judging from my own experience, my impression would be that belladonna is of very doubtful value. Nor is a more favorable conclusion to be drawn respecting *conium*. I have tried this remedy in several cases, in small and also in full doses; but the result was no more satisfactory than that which had been already arrived at by Professor Schroeder Van der Kolk.

With regard to *cotyledon umbilicus*, it is not very easy to believe in any powers beyond those which may be derived from the imagination acting upon a new and innocent medicine. It is very possible, also, that some part of the benefit, where there has been any benefit, may be ascribed to the leaving off of some less innocent drug.

Poudre de Neuchâtel is a remedy which has some credit in Switzerland, and which has lately been brought prominently under our notice by having been given in some of the cases recorded by M. Herpin. And what is this remedy? It is none other than the powder of *taupe grillée*—in plain English, fried mole. It is, indeed, a relic of the days when animal remains, of a more objectionable character, fried or otherwise, were offered to the unhappy epileptic. Injustice to M. Herpin, however, it must be said that he does not *believe* in this out-of-the-way remedy. He only tries it when other remedies have failed.

And certainly it must be allowed that *tracheotomy* does not realize all the original hopes of Dr. Marshall Hall. It does not always, perhaps usually, make the convulsion slighter. It does not prevent danger, for (as I have shown elsewhere) of the few patients upon whom the operation was performed, three have died either in the fit, or in connexion with the fit, and of the three the opening was free from all obstruction, at least in one. The first two cases, indeed, were calculated to damp the hopes of any one less sanguine than Dr. Marshall Hall. In the first case, the patient was a boatman, aged twenty-four, epileptic for seven or eight years, and whose fits were frequent and severe. The operation was performed by the late Mr. Cane, of Uxbridge, during a fit of "asphyxial coma," which had lasted nineteen hours. The relief was immediate, and for some months afterwards the fits were absent; but unfortunately for the credit of the operation, the patient, not liking the gurgling noise and the muteness consequent upon the unnatural opening in his windpipe, *had chosen to wear the tube with its opening carefully corked up*. This information I had from Mr. Cane himself. Very soon afterwards the man was lost sight of, having been discharged from his situation for drunkenness. In the second case, that of a woman, aged thirty-six, *death happened in a fit* about twenty months after the operation, and it is certain that the tube was open at the time. It is certain, also, that the fits continued after the operation, possibly a little less frequently and severely, but decidedly of the same

As to the value of *cauterizing the larynx*, it is less easy to come to a conclusion. Dr. Brown-Séquard says that a third of his epileptic guinea-pigs were cured by this mode of treatment, and that all the rest, with the exception of two or three, were relieved; and he suggests a similar mode of treatment in epilepsy. A little latter, Dr. Eben Watson, of Glasgow, recommended a similar mode of treatment, and relates three cases—two by himself, and one by Dr. Horace Green, of New York—in which the treatment appears to have been carried out with benefit. Dr. Brown-Séquard also lays stress upon *cautérization in other parts*, as in the nape of the neck, and especially in the neighborhood in which the aura originates, and he prefers the moxa or hot iron to milder measures. This practice, he tells us, proved very successful in his epileptic guinea-pigs. In a word, Dr. Brown-Séquard furnishes us with some additional facts in favor of *counter-irritants* as a means of cure in epilepsy; and not only so, but he gives a hint which may prove to be of some practical value, in pointing out the larynx, and the locality in which the aura originates, as sites in which "counter-irritation" *may be* especially serviceable. Now, the verdict of past experience is very much in favor of counter-irritants, and I can well believe that this verdict is true—true because the inflammation caused by the counter irritant may for the time rouse the sluggish circulation of the epileptic towards a pitch of safety, and because the discharge may tend to rid the blood of some impurity; but my own experience in this matter is too limited to enable me to arrive at a sound conclusion.

With regard to the treatment of the epileptic fit little need be said. As a rule, it will be only necessary to take care that the patient does not injure himself; that the head is not allowed to hang too low; and that any necklace or neckerchief be loosened. If salt be at hand, a spoonful may be put into the mouth; if water be within reach, a little may be sprinkled upon the face, though the advantages of such a practice are scarcely sufficient to compensate for disadvantages and risks arising from wetted garments. In ordinary epilepsy, it can scarcely ever be necessary to have recourse to chloroform, as it may be in some prolonged epileptiform affections; but if the convulsive stage is unusually prolonged, no remedy would seem to be more appropriate and effectual.

In concluding these brief remarks upon the therapeutics of epilepsy, we may say with Marshall Hall —"There is no royal road to the cure of epilepsy. The idea of a remedy for the disease is unphilosophical; and the treatment should consist in a well-advised plan, embracing every means of good, and avoiding every means of harm."

2. A single word must serve for what has to be said upon the therapeutics of other convulsive diseases. Where these diseases are of a chronic character, whether the convulsive symptom be tremor, convulsion, or spasm, it matters not which, there appears no reason for adopting an opposite plan of treatment to that which has appeared to be necessary in ordinary epilepsy. Nor does the case appear to be different where the convulsive symptom is associated with disease of an acute character. Inflammation, in itself, is no longer regarded as a sound argument for the adoption of lowering measures; and if inflammation in itself does not call for these measures, it certainly does not follow that a louder call is made by the occurrence of tremor, or convulsion, or spasm, before or after the inflammation. On the contrary, the natural inference from the premises is, that the convulsive movement might often have been prevented by more carefully husbanding the strength of the patient. According to the premises, indeed, the presence of tremor, convulsion, or spasm, would be a reason for transfusing blood, rather than for abstracting blood, except, perhaps, in one single case, and this is where, from the unusual prolongation and severity of the asphyxia in a first attack, there is danger of hæmorrhage into the brain and lungs. And certainly there is no practical objection to this view, for all must admit that we have no reason to be satisfied with the results of a lowering plan of treatment in acute convulsive disorders.

Original Papers.

ON THE
PATHOLOGY AND TREATMENT
OF
SCROFULOUS DISEASES OF THE SYNOVIAL MEMBRANE OF JOINTS.

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It is very difficult, or rather, it should be said, impossible, to understand diseased action in any part unless the ultimate structure and the interstitial action of its tissue be known. This may be said with equal truth of those structures having a special function, the disturbance of which quickly affects the life and health, and of those less studied parts, which serve mechanical purposes. The distinction between the special and connective tissues is most important, not only in histological but also in pathological science; for without a knowledge of the differences between the formation and the actions of these two classes of tissue it is utterly impossible to detect the character of inflammatory disease, the point at which the action aims, the curative tendency, nor the forces which subvert it. In joints we meet only, with different examples of the connective tissues—bone, cartilage, synovial, areolar, and fibrous tissues. Thus the study of all diseases of these parts may be said to consist on the whole pathology of connective tissues, which again must be founded on their physiology. A connective tissue may be described, in general terms, as a number of cells still retaining their nuclei, round each or each group of which a quantity of tissue material is collected; the quality of the tissue being derived, not from the contents, size, or shape of the cells, but from the consistence and constitution of the intercellular substance. Thus the cells of cartilage, bone, fibrous and areolar tissue, have probably the same proteine contents, but are surrounded, the one by chondrine in a solid form, the other by lamellated bone material, the third by gelatine in a fibrillated arrangement, and so on.[*] The function of these tissues is not vital but mechanical; the intercellular substance, therefore, whereon the function depends has no vital constitution, but each district or band is dependent upon its own cell for its support. The nutrition of these tissues is kept up by the selecting and organizing quality; their growth, by the due increase in number; their repair, by more abundant multiplication; their absorption, by excessive generation of the cells.[†] Thus it is that certain parts of the body—namely, all consisting of connective tissues—are capable of repair by like material through fresh formation of cells, which by the law of organic descent, develop similar tissues. The means of this repair are very interesting, since they are the simplest form of the inflammatory process; as, for instance, the union of a wound by the second intention, and so on.

If a wound be made beneath the skin of a rabbit, and kept open some time by a seton or other means, the parts around will in two or three days become thickened and hardened; and if this indurated portion, with a good deal of the surrounding tissue, be excised and examined microscopically, the following appearances will be seen:[‡]—Furthest from the track of the seton, the lines between the fibres of the white wavy tissue will be found granular, broad, and with indistinct edges; and a greater number than usual of cells, nuclei, &c., will be seen scattered in the meshes or interstices of the tissue. A little nearer the wound, the fibres themselves and their interspaces become cloudy and obscure, and cropping out of these latter are to be seen groups of cells which are mortared together by a granular material; and in those parts actually in contact with the silk, the fibres become entirely hidden by a dense mass of cells, nuclei, and granules; if the condition be far enough advanced, the fibrous (intercellular) material becomes eaten up by the excessive growth of cells. This, as we know, is the simplest form of the inflammatory process;[§] but even in this, the cells thus generated may go through many different developments: thus, if the seton be continued, many of them will be converted into pus-cells; if the irritation cease, they will become fusiform, and some will be gradually converted into fibre cells; and other changes will take place which we will not enter into here.

Such is the course of an inflammation produced in a healthy constitution by any local injury, whether a wound, blow, or other accident. The action may be primarily acute, and may then become chronic, and as the irritation ceases, leaves behind a thickened condition—i. e., the cell-growth will have produced a certain amount of new tissue. Certain cachexiæ—the rheumatic and the strumous—have the peculiarity of setting up inflammations without any local provocative, in which the diathesis acts the part of both exciting and predisposing cause. Struma is peculiarly apt to produce such local inflammations of so chronic a character that they hardly possess the usual marks of an inflammatory affection; but the superabundant cell-generation is even more distinct than is ordinarily the case. Thus a scrofulous synovitis is, in its first characteristics, not essentially distinct from another slow inflammation of that tissue; but the difference lies in the indisposition to further development, as I shall endeavor to explain. If there have been a breach of tissue from a wound, the gap must be filled up by cell-generation, which, in such a case, is called granulation. As long as the patient remains in a good state of health, the older cells—i.e., those of the deeper layers of this formation, assume the fusiform shape, and become gradually converted into cell fibres, and gradually into the fibrous material which forms the scar; but when the health begins to flag, the granulations do not change in that manner, but the cells remain, as a rule, round, increased unduly, and form those large, flabby exuberant growths which require repression, caustic, or other means to stimulate them to healthy action, and to keep down their generative tendency. Exactly the same condition is it which distinguishes the healthy from the strumous synovitis. In the former the membrane and the subsynovial areolar tissue generate cells which, if the constitution be good, form new fibrous tissue, causing some thickening, and only to a slight degree interfering with the action of the joint. In the latter, cells also are generated; but, instead of making fibrous tissue, they remain in the form of spongy granulation tissue, and produce that class of disease which Sir Benjamin Brodie has named a "Morbid Change of Structure of the Synovial Membrane," and which has also been called gelatinous degeneration.

Although it is true that this malady is more frequent in the knee than in other joints, it is by no means so limited to that articulation as some authors teach; it is frequent at the elbow or ankle; is not unfrequent at the wrist. It may follow some accident, producing for a time a more rapid inflammation; or it may, and quite as often does, commence as a slow, painless swelling, not attributable to any external cause whatever. The course of the disease is extremely slow, and may advantageously be divided into three stages, each marked by a definite event, and each distinguished by important differences in the sort of cure for which we may hope, and in the end to which treatment must be directed.

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[*] For fuller development of these views, see my paper "On Granulation," &c., in Beal's Archives of Medicine, No. 5.

[†] See the before-mentioned paper, and that "On Osteitis" in the Med-Chir. Review, April, 1860.

[‡] Two modes of examination may be chosen, and should if possible be combined; one, to cut the excised portion, previously pinned upon a piece of cork, into halves, with a sharp Valentin's knife, so as to secure a section of the whole tissue, which will not always be easy; the other, to snip off little pieces with scissors at different distances from the centre, and to tease each out gently with needles. Both are to be examined in dilute acetic acid.

[§] See my paper "On Nutrition, Inflammation, &c., of Articular Cartilage," Medico-Chirurgical Review, Oct. 1859.

The stages in which it appears desirable to divide scrofulous diseases of the synovial membranes are these:—

First stage.—That in which the synovial and sub-synovial tissues are alone involved.

Second stage.—That in which the cartilage and the bone become involved.

Third stage.—That in which the new tissue either begins to consolidate into fibrous membrane or to degenerate.

In the previous paper on this subject, the true nature of the jelly-like growth was explained. The symptoms of the disease are so well known that we need enter no further into them than is necessary to point out the differences between this and the next stage. The disease is generally attributed to some slight accident, just as scirrhus is usually ascribed to some such cause; but there is no doubt that it generally arises, without any external provocative, as a painless tumefaction of the joint; and frequently this swelling is accidentally discovered after it has existed for several days, or even weeks. According to my experience, this form of commencement is that which marks the more distinctly strumous and intractable form of the malady; but in all cases, after a certain time, there supervenes pain, which is not severe, but of a dull, aching, and, as many patients complain, of a bursting character; increasing towards evening, when the person has been sometime erect; and decreasing when the limb has reposed in a horizontal position. The form of the swelling is peculiar; not like that of acute synovitis, in which the position of ligaments is well marked; but on the contrary, is characterized by want of shape. It tends to the round or oval form (the former most in the knee, the latter in the elbow,) and conceals all the anatomical points and the configuration of the part, hiding the points of bone, ignoring the position of ligaments. The shapeless mass is soft, doughy, and quaggy; it does not fluctuate, but, on account of its extreme softness, presents a sensation which comes very close to fluctuation; it feels as though the material beneath the skin were not a fluid, but a semi-solid—a jelly, as, in fact, it is. The temperature of the part is only slightly increased.

This stage may continue for an almost indefinite period, but at some time the cartilages will become involved, and the second stage commences. The cartilages are not ulcerated by any eroding action of the synovial membrane, although the granulation which takes place from the internal surface overlaps them to more or less extent; but the inflammation spreads to those structures, and they undergo precisely similar actions—namely, cell-growth. (See my paper on the "Nutrition, Inflammation, &c, of Articular Cartilages," *Med. Chir. Review*, Oct. 1859; and, that also, on the "Relation between Synovitis and Ulceration of Articular Cartilage," in the *Edinburgh Medical Journal*, Feb. 1860.) This action, then, is an inflammation—i. e. hyperaction—of the nutritive machinery of the tissue, such as is the true nature of all inflammations. But there are no nerves in the cartilage to be affected by swelling or other result of its diseases; hence ulceration of their structure may, under certain circumstances, take place without giving rise to any painful symptom. We find such a breach of tissue in old persons who gave no sign of disease during life; but these ulcerations are not produced by an active inflammatory disease which has spread from other structures to the cartilage—indeed, they are simply degenerations, and we find all the neighboring parts healthy. Inflammation of the cartilages, on the contrary, is a painful disease, and produces certain symptoms which mark the second stage, although, as the pain is not situated in the cartilage (which has no nerves to feel pain), it is probable, if not certain, that ulceration has advenced some distance before we have any means of detecting its presence.

Mr. Toynbee pointed out, in 1841,* certain vessels which are formed during fœtal life in the epiphysal cartilage, and which after ossification is complete, become the looped and anastomosing nutrient vessels of the cartilage. These vessels are situated beneath the articular lamella, and become, as I first pointed out, engorged and hyperæmic during this second stage of synovitis; and it is this engorgement that produces the set of pains which are characteristic of cartilaginous inflammation. The inflammation begins by cell-action in the cartilage, which produces the hyperæmia as a necessary sequenee of demand for more nutriment; hence, when the hyperæmic pains come on, the inflammation is already established. The dull, aching pain, and that feeling of distension which is the pain *par excellence* of a strumous synovitis in the first stage, becomes now exchanged for a sharper, more severe form of aching, which is comparable to the pain of toothache; but, above all, this second stage is to be distinguished by starting or jumping of the limb when the patient is dropping off to sleep. The first appearance of these pains is the first certain sign that the cartilages are ulcerating. There is a symptom whereon much stress has been laid, but which I believe to be of very doubtful import—viz., tenderness on pressing the articular surfaces together. I have seen four cases in which this symptom was altogether absent up to the moment of removing the part, and yet have found extensive disease of the cartilage. Starting of the limb was present in all these instances. I have seen one case in which there was tenderness without cartilaginous ulceration. Hence this symptom is not to be relied on as proving that the cartilages are diseased; but I am not as yet prepared to say what exact condition, if any, it does indicate.

The supervention of the starting of the limb is a much more reliable sign that the second stage of strumous synovitis has commenced, which, like the first, is with regard to time indefinite in its duration. It is marked by more severe symptoms; pus forms more abundantly in the cavity, and probably finds its way outwards; a more or less extensive portion of the cartilage and its articular lamella disappears; the cancellous cavities are laid open towards the joint, and from them begin to sprout granulations like those developed from the synovial tissue, while from the wear and tear of the disease hectic supervenes. The joint therefore is, as a frictionless apparatus, destroyed, and to speak of its destruction as a further action seems absurd; but let it be considered that the aim of the disease from the very first has been to fill up the cavity with granulations; even the destruction of the cartilage and laying bare the cancelli have this object. If it succeed ultimately, we do not call the joint destroyed, although it be immovable from anchylosis; but actions take place, whereby the new-formed tissues and the neighboring parts enter in the way of destruction.

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* On the organization and Nutrition of Non-vascular Animal Tissues. Philosophical Transactions, 1841.

The third stage consists of actions, either of which may be singly present, or either may predominate; the one is further development, the other degeneration of the granulations. Both may commence at any period during the course of the first two stages; but degenerations hardly occur, except when the disease has lasted a considerable time. They are of many sorts, but it would detain us too long to follow them out here. Suffice it to say that tubercle in the so-called tubercular synovite (a rare disease) is thus produced; the tubercle is not a cause of the inflammation, but is formed from a product of that action. Abscesses in the periarticular tissues are produced by change of the granulation-cell into the highly generative pus-cell. Fatty degeneration is frequent, and produces death of the degenerate and suppuration of the surrounding portion. If these take place in the tissue which springs from the bone, and occupies the cancelli, masses of the osseous tissue may slough and come away. With all this the disease spreads, abscesses form amongst the deep muscles, and the inflammation runs along the medullary canal.

The further development consists, as we have already seen, in an interstitial change of the cells into fibre-cells and fibres, and ultimately into new coarse areolar tissue. If this has been perfected during the first stage, the joints will be restored without further damage than a certain amount of thickening and difficulty of movement. If in the second stage, the state left will depend on the more or less advanced condition of that stage. If the cartilage have disappeared, the granulations from the bone and those from the synovial membrane are intermingled, and fill the cavity; they will, on becoming fibrous, form a strong but flexible bond of union between the bones—a false anchylosis; and if after a longer period the fibres ossify, a true anchylosis will be established.

Thus the condition in which this process will leave the joint, varying from a mere inconvenient thickening to utter stiffness, depends upon the stage to which the malady had previously advanced, and our endeavors must be therefore directed to bring on the developing action as early as possible; to convert the already formed granulations into fibrous tissue, and to prevent the further spread of the granulating process.

(*To be concluded.*)

NOTES ON

ATROPHY AND DEGENERATION OF THE ARTERIES, ETC.

By Edwin Canton, Esq., F.R.C.S.,

Surgeon to the Charing-Cross Hospital, and Lecturer on Surgical Anatomy.

PART V.

Amongst the various causes leading to impairment of nutrition in the coats of arteries, with the supervention of degenerative changes in them, none, perhaps, is more rife in producing these states than intemperance; and, however vigorous the constitution may have been originally, persistence in this pernicious habit, sooner or later, undermines its strength, and is often the insidious, but unerring guide to a premature grave.* Nevertheless, we may occasionally meet with those, the chief part of whose lives have been passed in unswerving adherence to the habit of drinking, and who, notwithstanding, have attained to great length of years. Such cases, however, must be regarded as quite of an exceptional character, and I doubt not that in most of them, were due inquiry made, some associated circumstances would be found which tended materially to modify, or to a great extent counteract, the noxious effects of these deadly potations. In some instances which have fallen under my own notice, this I ascertained to be the case:—A stout, elderly gentleman, whom I was called upon to attend, and who for many years had been accustomed to drink several glasses of spirit-and-water daily—not unfrequently increasing the amount at night in the company of friends, without ever having been known to become intoxicated—used invariably to suffer from relaxation of the bowels as a sequel to these orgies, and voided always copious bilious motions, with blood occasionally admixed. To this circumstance he attributed the preservation of, what he was pleased to term, his *health*, and was wont, facetiously, to style his intestinal canal his *safety valve*.

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* "It would be, frequently, a source of error in medicine, if we did not admit, in at least a wide circle of cases, the possibility of a parity of effect from a diversity of cause, in form if not in essence. Whatever lowers or vitiates the action of the vital forces must tend to the promotion of a diseased nutrition; and thus intemperance may provoke, on the one hand, what hereditary disposition or peculiar tendencies of constitution, or some other chain of causation, may excite on the other."—C. Wilson, M.D., "The Pathology of Drunkenness," p. 81. Edin., 1855.

"The continued but irregular excitement of the contractile action of the heart and arteries, and which is the result of the habitual use of stimulants, must, of itself, predispose their tissues to disease; and this predisposition will, of course, be increased by the contact of blood charged with alcohol with their lining membrane, as well as by the general disordered condition of the nutritive operation. Now, attacks of acute arteritis seem, not unfrequently, traceable to alcoholic intoxication, and it cannot, therefore, be regarded as improbable that those more chronic disorders of their walls which give rise to aneurism, softening, fatty degeneration, and other structural changes, and which, therefore, predispose to hæmorrhage, should be favored, if not absolutely produced, by the habitual presence of alcohol in the circulating current. Accordingly we find the intemperate use of alcoholic liquors specified by authors on Diseases of Arteries as amongst the most important of their predisposing causes."—W. B. Carpenter, M.D., "On the Use and Abuse of Alcoholic Liquors," Second Edition, p. 78. Lond., 1851, Another example fell under my notice where the draughts of whiskey-and-water indulged in were large, frequent, and potent, and had been persevered with for many years; yet this *habitué* was old, and apparently healthy. I found, moreover, that he never labored under headache, thirst, dry skin, nausea, loss of appetite, impaired digestion &c.; but in experiencing always great freedom of perspiration, the balance of the circulation, through this eliminative effort, became readjusted, and the other functions of the body were proportionately maintained in due order and activity. A gentleman who arrived at a great age, and who was as well known for his attention to business as for his deep devotion to the bottle, might be seen, at an early hour every morning, in the Park, taking, as he termed it, his constitutional walk, and distilling off, as it were, by the skin, the superabundance by which his system would have been otherwise oppressed. I have known, also, of another instance, where a person, for a long succession of years, steadily pursued a course of daily and nightly drinking, and who, nevertheless died, aged. I understood that he had been originally a spare man, but towards the latter period of his life he became corpulent and suffered from occasional attacks of gout. His special beverage was Irish whiskey, to which, he used to say, he had become perfectly *acclimatized*. He was never known to be intoxicated; but, in my attendance on him, I learnt that whenever he had consumed a certain amount of his favorite punch, he always experienced uneasiness of stomach, and retired from company to find relief by freeing this organ from its contents; only to return, however, and renew his debasing debauchery to a similar disgusting termination of it.

Happily, for the credit of human nature, the above present us only with illustrations of rare peculiarities of constitution in which excesses are tolerated, and, in the midst of such degrading indulgence, the attainment of length of life allowed. "People who have any regard for their health and lives," observes Dr. Cheyne,[*] "ought to tremble at the first cravings of these poisonous liquors. (Strong waters should never be taken but by the directions of a physician, or in the agonies of death.) For when persons arrive at that state that they may become necessary for their ease and freedom of spirits, they may justly be reckoned amongst the dead, both as to the short time they have to live and the little use they can be to themselves or mankind."

It must be borne in mind, that the attainment of longevity in the few who have lived the life of intemperance is no argument in favor of man's constitution being so framed as to be capable of submitting with impunity to habits of inebriety; rather should we regard them as instances of original organization of such strength that, had proper prudence been exercised, life might not improbably have been prolonged far beyond the average period of existence. Moreover, it will be observed, on consulting the records of longevity, how exceptional are the cases I refer to, and how numerous, on the other hand, are those "prizes in the lottery of life," as Buffon has termed them, in whom frugality and sobriety have been prominent characteristics. Brande has very aptly remarked: "*Every healthy toper is a decoy duck, and no more proves that health is safe in intemperance than does an unwounded soldier that life is secure in battle.*"

An able reviewer in the *Dublin Quarterly Journal of Medical Science* (vol. xxvii.. p. 391, 1859), speaking of the attainment of length of years by those who have lived intemperately, thus expresses himself:—"We are acquainted with many members of the old school,—a school, happily, passing away from amongst us,—who would not consider the business of the day brought to a satisfactory conclusion did they not go to bed drunk, or, at all events, in a state closely bordering on inebriation, being accustomed to some forty or fifty years of their lives to drink far beyond what is tolerated by the usages of society. The persons to whom we now allude never suffered from delirium tremens, *but they never drank before dinner;* up to that meal they were constitutionally abstemious. We recall to mind, at this moment, a gentleman of this class, who moved in the highest circles, and filled the highest positions in his native country. His family never remembered him to have gone to bed sober; yet he never had an attack of delirium tremens, but he never drank anything before dinner. He is now an octogenarian; and, some few years back, in consequence of a fall from his gig, he fractured his thigh-bone, from which, however, he recovered with complete bony union, only to resume his former habits and enjoy a state of robust health to which many of his very advanced age are complete strangers. The explanation of such an exception from what appears to be the curse attached to excessive indulgence in this vice is, we think, that people of these habits are enabled to enjoy, at all events, one, if not two, meals; they make a good dinner, if not a good breakfast, and thus the balance is re-established between the muscular and nervous systems. Be this, however, as it may, the fact stated is the result of no mean experience in such cases—the explanation offered may be taken *quantum valeat.*"

Not distantly related to the subject which has just undergone consideration—viz., intemperance as a cause of atrophy and degeneration of the arteries—is *gout.*[*] In this disease the peculiar morbid state of the blood present, originating in errors of the assimilative operations, together with the impairment induced in the functions of the secreting organs, eventuate in so perverted an action of the nutritive process, that the coats of the bloodvessels suffer atrophy, and degenerative changes subsequently occur in them.

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[*] "An Essay on Health and Long Life. 8th edit., p. 50. London, 1734.

[*] "During a long and extensive professional connexion with a large rural district, we never knew an instance of gout occurring amongst agricultural laborers, who, of course, form the great mass of the population. Gout was not uncommon amongst tradesmen, but still more frequent in the class of gentlemen and opulent farmers." (p. 218.)

"All the tradesmen we have met with affected with gout have been known to us for their intemperate habits, and especially their abuse of malt liquors; a very large proportion were innkeepers." (p. 219.)—W. Budd, M.D., "Lib. of Med.," vol. v. Lond., 1840.

It was formerly believed that the same material of which the "chalky" deposits, so common in gout, are composed, was likewise to be found freely charging the arterial tunics; entering, too, into the composition of the vegetations which, in this affection, often spring from the aortic valves, or stiffen them under the form of specks and plates. One of the chief advocates of this opinion was Lobstein. He relates the case[*] of a person who died at the age of forty-eight years, and who during the greater part of his life suffered most severely from gout. The mitral and aortic sigmoid valves were found extensively affected by "plaques osseuses et incrustations osséo-pierreuses." A portion of these was analyzed by M. Masuyer, and the result of the examination published in the "Journal de Département du Bas-Rhin," (t. i., p. 351.) It was found to consist of a mixture of phosphate and *urate of lime and soda.* "Elle avait, par conséquent," remarks Lobstein, "la plus grande analogie avec le tuf arthritique des articulations." In another portion of his work this author inquires (p. 565), "Peut-être trouverat-on cette même cause en jeu dans l'ossification des artères chez des sujets de trente ans—c'est-à-dire, à une époque de la vie qui favorise le développement de l'arthritis. Serait-ce aussi la raison pour laquelle les artères des extrémités inférieures sont bien plus souvent ossifiées que celles des extrémités superieures, la goutte occupant, en général, plus fréquemment ces mêmes extrémités?"

Although I have had the not unfrequent opportunity of observing calcareous degeneration in the arteries of gouty subjects, I have never been made aware of the presence of urate of soda in these deposits, and the weight of authority which the latest writer on the subject of gout gives to this opinion is the most valuable which could be adduced in corroboration of the statement of the very general absence of this salt in such deposits. Dr. Garrod[†] observes—"I have carefully examined those found on the valves of the heart, and the atheroma from the aorta of several gouty patients having extensive chalk-stones, but have always failed to discover the least trace of uric acid; but the tabular crystals of cholesterine were often present in such matter." Again it is remarked (p. 510)—"To consider the calcareous deposits as a proof of gouty inflammation is altogether an error; for I have shown that in gouty subjects with concretions of urate of soda in nearly all the joints, the deposits upon the aorta were of a different character, consisting either of phosphate or carbonate of lime, or of cholesterine and fatty matter."

So usual is it to find calcareous degeneration of the arteries in those who have been gouty, that many authors have not failed to notice this appearance in the accounts they have furnished of post-mortem examinations:—*e. g.*, Mr. H. Watson,[‡] in relating the appearances found in the body of an extremely gouty subject, states that the thoracic aorta was healthy, but this vessel in the abdomen was ossified from the diaphragm to the iliacs. Morgangi[*] mentions the case of Cardinal Cornelli who died in his sixty-fourth year from metastasis of gout to the heart. He was exceedingly corpulent. After death, the gall-bladder was found to contain a calculus; the right kidney contained eleven calculi, most of them of considerable magnitude. The cartilages of the trachea were hard; the aorta was somewhat dilated in the thorax, and in its course through the thorax and abdomen some ossification had taken place. Dr. Saunders[†] describes the case of an honorable baronet who died in his sixty-fifth year, and who had been "the subject of severe paroxysms of gout and politics for many years." The coronary arteries of the heart were completely ossified, and the inner surface of the aorta also exhibited ossific formations in different stages. In the instance of a gouty subject, aged sixty, Dr. Cheyne[‡] states that "the aorta was studded with steatomatous and earthy concretions." The last case I shall, for the present, refer to is that of King George the Fourth, whose habits of life, frequent attacks of gout, great corpulence[§] during the latter part of his reign, &c., are circumstances too well known to require more than this passing allusion to them.[‖] It was found at the autopsy that "the three semilunar valves at the beginning of the aorta were ossified throughout their substance, and the inner coat of that blood-vessel presented an irregular serface, and was in many parts ossified. *Signed*, Henry Halford, Matthew John Tierney, Astley Paston Cooper, B. C. Brodie."[¶]

(To be continued.)

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[*] Traité d'Anatom, Pathol., vol. ii., p. 527. Paris, 1833.

[†] The Nature and Treatment of Gout and Rheumatic Gout, p. 246. Lond., 1859.

[‡] Medical Commentaries, vol. i., 1782.

[*] Cook's translation, vol. ii., p. 619. Case 4.

[†] Obs. on Gout," Edin. Med. and Surg. Journal, vol. xxx., p. 267. 1828.

[‡] Dublin Hospital Reports, vol. ii., p. 217. 1818.

[‖] Corpulence is often such an excess of health that it is really the beginning of disease."—Sir C. Scudamore, "A Treatise on the Nature and Cure of Gout and Gravel." Lond., 1823.

[§] "Health and long life are usually blessings of the poor, not of the rich, and the fruits of temperance rather than of luxury and excess. And, indeed, if a rich man does not, in many things, live like a poor, he will certainly be the worse for his riches; if he does not use exercise, which is the only voluntary labor; if he does not restrain appetite by choice, as the other does by necessity; if he does not practise, sometimes, even abstinence and fasting, which is the last extreme of want and poverty; if his cares and his troubles increase with his riches, or his passions with his pleasures, he will certainly impair in health whilst he improves his fortunes, and lose more than he gains by the bargain; since health is the best of all human possessions, and without which the rest are not relished or kindly enjoyed."—Sir W. Temple's Works: "On Health and Long Life," vol. iii., p. 278. Lond., 1770.

[¶] The Times, Friday, July 2nd, 1830.

John Hunter.—At a large meeting of John Hunter Statue Committee, at the Royal College of Surgeons, on the 6th instant, it was decided that the execution of the marble statue of the immortal Hunter should be entrusted to Mr. Henry Weekes, A.R.A., and that when complete it should be placed into the museum of the College. It is the intention of the committee that Sir Joshua Reynolds's portrait of the great original, his *chef d'œuvre*, should be followed as nearly as practicable by the sculptor.

ON

THREE CASES OF PHLEBITIS OCCURRING IN PATIENTS AFFECTED WITH THE SYPHILITIC POISON.

By G. P. Girdwood, Esq., M.R.C.S.,
Assistant-surgeon, Grenadier Guards.

In the autumn of 1857 I was called upon to attend a gentleman for syphilis. The primary sore was very slight, quite superficial, and healed up in the course of a few days. Within three weeks of my first seeing him a secondary eruption of maculæ made its appearance. This was treated with iodide of potassium and bichloride of mercury. Fissura in ano now made its appearance, from which my patient suffered very much; this misery, however, soon yielded to the application of black-wash and the administration of Plummer's pill. As time passed on the eruption disappeared, and was succeeded by an ulcerated condition of the mouth and fauces.

The ulceration soon healed, under the application of a solution of bichloride of mercury, of a strength of four grains to the ounce, painted on frequently during the day. The syphilitic poison, however, had now reduced him very much, and he was in a low, irritable state of system, when one morning, having been under treatment for three months, he showed me a small hardened tumour in the course of the long saphena vein of the left leg. This I found to be the result of inflammation of the vein. The swelling was situated opposite the lower end of the belly of the gastrocnemius muscle, and for about three inches above and below this point the vessel was hard and inflamed, and apparently obliterated. Bark and sulphuric acid were administered, good living was recommended, and blue ointment smeared along the course of the inflamed vein. The inflammation soon subsided, and in a few days the hardened cord representing the vein disappeared, leaving the vein in its normal condition. Two weeks passed and then the saphena major of the left leg was attacked in a similar manner, at the centre of its course. The inflammation in this fresh attack extended up to the saphena opening. The treatment that was adopted formerly soon checked the inflammation on this occasion also but as the inflammation disappeared in the left leg, it appeared precisely in the corresponding place in the right leg. This diseased state of vein also quietly subsided, leaving the veins pervious as before. The patient is still suffering from syphilitic poison. This fact is evidenced by several maculæ that make their appearance from time to time, as also by a recurrence of the fissures in the anus. Now may I propound this question: Was this an attack of idiopathic phlebitis occurring coetaneously with a syphilitic state of the body? or was it an attack the result of the action of syphilitic poison? I have never heard that phlebitis has been noticed as a sequel to syphilis, and in my intercourse with others I have not found anyone who has noticed it as a result of the action on the system of this poison.

In January last, I was called upon to attend a man in the regiment to which I am attached, attacked with phlebitis of the saphena major vein of the left leg. The attack had come on without any cause that could be assigned. The man was in a weak, irritable state of body. He was treated in the same way as the patient whose case I have described, and the course of the case was almost identical. The left vein became a hardened cord for two-thirds of its length; this was gradually relieved under the treatment adopted; and as the inflammation in the left leg subsided, it was interesting to notice that the vein in the right leg was attacked. In the course of a fortnight this fresh inroad also was removed. On referring to the history of this man, I found that he had been under treatment for a small superficial syphilitic sore two months previously, which had healed in a few days. He had not taken mercury. The phlebitis was followed in a short time by an eruption of copper-colored maculæ, which rapidly disappeared under the use of iodide of potassium.

In February of the present year, I was called upon to attend another case precisely similar. A small superficial sore on the glans penis healed rapidly without the exhibition of mercury, and was succeeded, in the course of three weeks, by an eruption of maculæ, accompanied by phlebitis of the left saphena major vein. The inflammation yielded readily under the same treatment as in the two previous cases, and appeared in the right leg as it yielded in the left.

There is an identity in these three cases which is remarkable. In each case the primary sore was small and superficial, and quickly healed without the internal administration of mercury. In not any one of the cases was there a bubo. In all three, the phlebitis attacked the left saphena vein first, and subsequently the right. In all three, the attack lasted nearly the same time, and yielded under the same treatment. In all three there was the same kind of eruption. In the first case, there was one symptom which was wanting in the other two—namely, a faltering condition of the pulse; this faltering condition of the pulse I have pointed out as being a dangerous symptom in phlebitis, and leading to an unfavorable prognosis.

The identity in these three cases points, I think, to something more than simple coincidence; it looks very like cause and effect. It would greatly assist us in forming a conclusion as to whether we are to look upon phlebitis as a sequel to syphilis, if anyone reading these cases, and knowing of others similar, would record them.

Wellington Barracks, 1860.

The Price of Wounds.—Compensation for wounds received in the naval service is assessed on a very curious scale. The pleasure of the Queen governs many pensions for these injuries; but upwards of a hundred years ago the Admiralty made a rule that no officer should receive a pension unless his wound is equal to the loss of a limb. From the last naval estimates it appears that the sum given annually in pensions for wounds is only £2457 11s.

ON A CASE OF

EXCISION OF DISEASED AND ANCHYLOSED KNEE, WITH GOOD RESULT.

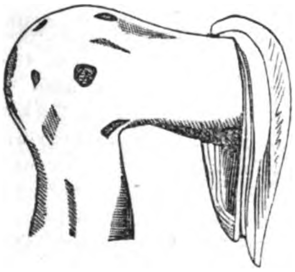
By Christopher Heath, F.R.C.S.,

Demonstrator of Anatomy at the Westminster Hospital.

Since the operation of resection of the knee-joint, may be said to be still upon its trial, I think it right to publish the following case, which presents some peculiarities. In order, however, to prevent mistakes as to the statistics of the operation, I should say that this case is included amongst those tabulated by Mr. P. C. Price in his paper read before the Medical Society of London.

Charles P——, aged eleven years and a half, was brought to me at the St. George's and St. James's Dispensary, on the 8th June, 1858, with the following history. He had scarlet fever six years ago, and the left knee then became swollen; and continued so for three years; the boy being able, however, to walk about. Three years ago an abscess formed on the outside of the joint, which was opened by Mr. Blagden, who applied a straight splint, and the boy was kept in bed three months, after he was able to walk about again, the wound still discharging slightly. About twelve months ago, an abscess began to form on the inner side of the knee, and he was taken to one of the metropolitan hospitals, where he was admitted as in-patient on the 15th of September, 1857. The abscess burst, and another formed. The actual cautery was applied over the joint, and he was discharged at the end of April, 1858, as the parents would not consent to his undergoing amputation of the thigh.

Both mother and child agree in saying that on admission into the hospital the knee was straight and rather stiff, bnt upon his coming out it had become bent to just a right angle, which is its present condition. There is an open sore on each side of the joint, and one over the middle of it, which discharge freely. The knee is firmly fixed at a right angle, and is slightly swollen. The boy suffers pain at night, but is otherwise in pretty good health, having improved since he has been at home. The accompanying sketch from a cast made at the time will give an idea of the condition of the parts :—



There being evidently firm anchylosis of the joint, upon careful examination under chloroform, and the probe leading to bare bone through each of the sinuses, resection of the joint was evidently the only course to be pursued; and this having been explained to the parents, they consented to its performance.

Operation June 29th, 1858.—Having made an H-incision, I attempted to turn up the patella with the flap, but found that bone firmly fixed to the outer condyle, and the femur also anchylosed to the tibia. I therefore removed the whole joint in a wedge, carrying the saw immediately behind the patella and through the upper part of the tibia. As the parts did not come quite readily in apposition, I next removed a slice about half an inch thick from the femur, when the cut ends came easily together. The edges of the wound were brought together with a few stitches, and the limb was placed on a straight iron splint with a few straps and a bandage. Two small abscesses were opened during the operation, and a quantity of gelatiform synovial membrane was removed. Some oozing took place in the evening, but was easily arrested.

The boy, although feeble, made a good recovery, the splint being removed for the first time on the 10th of August, when a gutta-percha one was substituted. In September, a small abscess formed over the head of the tibia, and the limb was replaced for a few days on the iron splint, an inside splint being also adapted to it, to counteract a tendency to bow outwards.

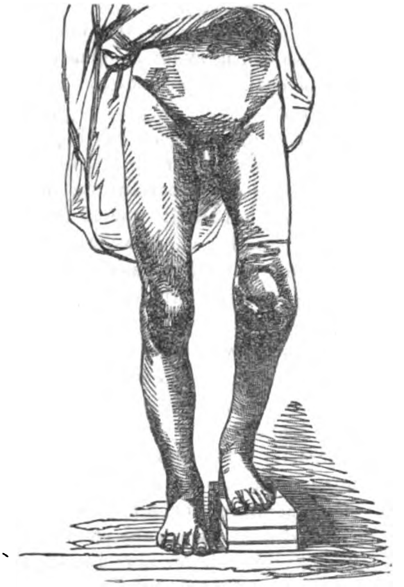
On the 4th of October the boy was sent to the Margate Infirmary, with the limb straight and in a gutta-percha splint. The sinuses below the knee continued to discharge slightly; the rest of the wound was entirely healed.

The portion of bone removed showed erosion of the articular cartilages and thickened synovial membrane. On maceration for a short time, it appeared that the anchylosis between the patella and the condyle, and also on the inner side between the femur and tibia, was only fibrous, but on the outer side bone had been developed, as was seen on a section. The second slice of femur was found to have included the whole of the epiphysis.

The boy returned from Margate in December, 1858 very much improved in condition. The limb was in good position, though a little bowed outwards. Two sinuses over the head of the tibia continued to discharge rather offensive matter.

May, 1859.—Boy much improved in health, and able to get about with the help of a stick only. The two sinuses over the tibia continuing to discharge, notwithstanding the use of injections, &c. I gave him chloroform and laid them open. Found that they both led into a cavity in the tibia, which was filled with strumous material. This I gouged out and stuffed with lint. The boy made a good recovery, and soon got about again with a high boot.

June, 1860. (Two years after the operation.)—The boy is well and strong, and gets about admirably with a high boot. There is still a sinus over the head of the tibia which discharges occasionally, but otherwise he has no trouble with it, and no pain at all. He continues to wear a gutta-percha splint, by his own desire, since I do not think it at all necessary, the anchylosis being perfectly firm. The boy does not appear to have grown much, but not having previously measured him I cannot speak with certainty. The measurements at the present time are —Height: 4ft. 6in. Right side: From anterior superior spine to lower end of femur, 13in.; from the last point to inner maleolus, 10½in. Left side: From anterior superior spine to lower end of femur, 11 inches; from the last point to inner maleolus, 10½ inches. Thus the difference is exactly 2½ inches, and depends, as nearly as can be ascertained, upon a shortening of two inches of the femur and half an inch of the tibia. The heel of the boot he wears is two inches and a half in depth. The accompanying sketch is from a photograph, and care was taken to have the pelvis perfectly level, while the amount of shortening is indicated on the block under the foot. The limb is not, perhaps so perfectly straight as some that have been seen ; but it must be borne in mind that the operation and treatment were conducted in a front kitchen, and under every disadvantage as to attendance, &c.



I could have wished that, instead of a second slice of femur, I had removed a further portion of tibia, thereby possibly preventing the abscesses, &c.; but at the time of the operation the surgeon's attention had not been so forcibly called to the advisability of leaving the epiphysis of the femur as has since been the case. I shall endeavor to keep an eye upon my patient, so as to ascertain and report upon the effects of further growth.

Sackville-street, June, 1860.

A WINTER AT MENTONE, NEAR NICE.

By J. Henry Bennett, M.D.,
Physician-Accoucheur to the Royal Free Hospital, etc.

A six months' residence on healthy ground at Mentone, one of the most sheltered winter stations in the South of Europe, has given me practical information concerning its climate and health capabilities which will, I presume, be acceptable to many, and which I will endeavor briefly to embody.

Mentone is a small Italian-like town of 3000 inhabitants, situated in latitude 42°, twelve miles east of Nice, at the foot of the Maritime Alps. It is the first station out of Nice on the Cornice road to Genoa, and is the largest town of the principality of Monaco, which has recently been annexed to France along with Nice.

The Gulf of Genoa is formed in its western half, between Nice and Genoa, by the Maritime Alps, the immense masses of which descend to the sea so abruptly in some places as to leave no shore, their beetling crags terminating directly in the sea. This is the case immediately behind and to the eastward of Nice. Owing to this circumstance, there was formerly no continuous land-road from Nice to Genoa. The one that now exists is of recent origin, and has been carried in many places over and along high mountains and precipitous cliffs. Where the shore exists, it is generally a mere rocky, sandy ledge, from which the mountains rise directly.

On leaving Nice for Genoa, the road at once begins to ascend the Turbith, a mountain about 3000 feet high, and one of the spurs that run directly into the sea. It is at the foot of this mountain that Nice lies. The ascent occupies two hours, the descent about the same time, and at its termination is situated the town of Mentone. When the traveller has crossed the Turbith and begins to descend, a glorious panorama opens before him. The higher mountains, receding from a beautiful bay, open to the south-east, and form a magnificent amphitheatre, which at its centre recedes five or six miles from the sea. The bay, about four or five miles in circuit, is divided into two unequal portions by a hill, which gradually slopes to the sea, and on the sides of which climb the houses that constitute the old town of Mentone. The space between the sea and the receding mountains, which are between 3000 and 4000 feet high, is occupied by a series of lower hills, which slope gently to the shore, and which are divided by numerous ravines and torrential valleys. The higher range of mountains, of a greyish-white, is generally precipitous and bare, being destitute of vegetation. The lower hills are densely covered with trees, and present at a distance the aspect of forest-clad, rounded ridges, gently descending to the sea.

Thus the bay in the centre of which Mentone is is placed, with its background of rising olive-clad hills, is thoroughly protected from the north-west, north, and north-east winds by the higher mountain range. Beyond the latter are the still higher mountains of the Col di Tende, which constitute the main mass of the Maritime Alps, extending for sixty miles inland, and which, no doubt, increase the protection. Indeed, the bay is only open to the south and south-east; consequently, the mistral, as a west or north-west wind, is not at all felt; but as a south-west wind it is partially felt. The north wind passes over the higher mountains and falls into the sea at some distance—a couple of miles—from the shore. When it reigns, there is a calm at Mentone, and the sea near the beach is also calm, whilst at some distance from the shore it may be crested and furious. This I have often witnessed from the hills. The north-east wind leaves the town and hills untouched, but when strong, raises a heavy sea; whilst the east and south-east (the *levant*), and the direct south (the *sirocco*), blow directly into the bay, and always occasion a heavy, rolling swell.

Owing to the complete protection from the west, north-west, north, and north-east winds, and owing to the reflection of the sun's rays from the sides of the naked mountains which form the amphitheatre, the climate of Mentone is rather warmer than that of Nice—indeed, warmer than that of any part of the northern or central regions of Italy. This fact is proved by the presence of groves of large, healthy lemon-trees, which occupy the sheltered ravines and the warmer hill-sides, wherever water can be obtained; constant irrigation, summer and winter, being necessary for their cultivation. They are, indeed, much more numerous than the orange-trees, although many fine plantations of the latter are found throughout the district. Orange-trees can bear without injury several degrees of frost, whereas one degree destroys the fruit of the lemon-tree, and two or three destroy the tree itself. Olive-trees, which can bear with impunity seven or eight degrees of frost, occupy, generally, the summits and sides of the lower hills, presenting at a distance the appearance of sombre evergreen forests; at a higher level still, on the highest regions of the lower hills, and climbing up the base of the higher or back range, are forests of stunted pines.

The orange-tree flowers but once in the year, and bears one crop of fruit only. The lemon-tree, on the contrary, flowers all the year through, and bears at Mentone four distinct fruit crops. Its existence in groves of large trees, from twenty to thirty or more years old, without artificial protection, and its profitable cultivation throughout the year, prove that there must have been freedom from severe frost for many years. I was told, however, that about twenty-five years ago nearly all the lemon-trees in the country were destroyed in one night, which may account for no very old trees being seen.

During the last winter the thermometer descended to zero several nights consecutively near the sea-shore, slight films of ice forming on flagons of water on the road and near the torrents, and the highest mountain range being covered with snow. This alarming state of things occasioned profound dismay in the minds of the natives, whose principal riches are the lemon groves. For several nights many of them sat up, in the greatest consternation, watching the thermometer. Indeed, there was a complete panic with reference to this lamentable and unheard-of condition of the weather. Such feelings and fears plainly indicated that frost and snow were very unusual and unwelcome visitors. We often had snow for a few days on the summits of the higher mountains, but on this occasion a few flakes appeared on the shore level. On no other part of the Cornice road do lemons grow thus freely. At Cannes they are all but unheard of, and at Nice they only grow in sheltered and protected sites, and not luxuriantly.

Another evidence of the exceptional warmth of the climate is the presence of large caronba trees, and of large euphorbias. The latter grow in many places to a great size, like large rhododendron bushes. At Nice I only found them as luxuriant in one spot, the south-east side of the castle. Owing to the absence of frost, many of our garden flowers, which are cut down by the first frosty night, continue to flourish and bloom all the winter through. This is the case, for instance, with the geranium, the heliotrope, and the verbena, which continue to flower freely throughout the winter in the open air in many gardens.

The geological features of the country are very interesting, and much may be observed in a small compass. The high range of mountains which form the amphitheatre are of secondary Oolitic or Jurassic unstratified limestone. At both the eastern and western extremities of the Mentone bay this formation juts out into the sea. At the eastern extremity the road to Genoa is cut out of the side of the mountain, and ascends to a great elevation, crossing a deep ravine by a bold bridge, the Pont St. Louis. A short distance on each side of this point are observed the strata which replace the chalk formation in Italy. Then commences the tertiary system by a well-developed nummulitic limestone, full of nummulites, which is followed by other representatives of the miocene, pliocene, and pleistocene groups. These strata are observed on both sides of the Pont St. Louis, in the same order, eastwards towards Venlimiglin, and westward to Rouabruna, at the base of the Turbith ascent. At both these points appear the pleistocene boulder drift. Thus the lower hills which occupy the ground, as it were, of the Mentone amphitheatre, represent from east to west the different strata between the secondary Jurassic oolite and the post-tertiary boulder drift.

The water which falls on the higher mountains, in finding its way to the sea, has worked deep ravines, which expose the structure of the tertiary rocks, and have formed numerous narrow valleys, by which access is obtained to the higher mountains, and to three or four small picturesque towns or villages therein built. These ravines form, as we shall see, an important feature in the sanitary history of Mentone. Owing to the backbone of the district, as it were, being limestone, the water is everywhere very hard, and the springs considered the purest are loaded with lime. Treated with oxalic acid, the water gives a most abundant precipitate, even when taken from springs in the sandstone rocks. I had to meet this difficulty by giving distilled water or rain water to several patients. In other cases the hardness of the water was evidently beneficial, as, for instance, in cases of chronic diarrhœa.

As is usually the case in the south, the rain generally falls in great quantities in a limited space of time, filling the beds of the torrents with enormous volumes of water, which carry great masses of stone with them from the mountains. There the water-courses are, at other times, as in Central and Southern Italy, mere rivers of stones, with a thin stream of water trickling through the middle. On one night in December, 4½ in. fell in ten hours. The total rainfall last winter was 23·68 in., from October 9th to April 21st: October, 8·02 in.; November, 2·21 in.; December, 6·96 in.; January, 3·24 in.; February, ·18 in.; March, 1·26 in.; April, 1·81 in. These data were given me by a friend, Mr. Smith, of Rome, who kept an accurate register. According to my own observations, it rained in November five days, in December five, in January four, in February one, in March six, and in April, up to the 23rd, eight days; in all, twenty-nine days, from Nov. 3rd until April 23rd. In October, I was told it rained nearly every day. I constantly saw it raining on the upper hills, or a few miles out at sea, when it was quite clear and fine at Mentone—a fact easily explained, and which partly accounts for the peculiar dryness of this place.

During the six months that I was at Mentone I never once saw a fog, day or night, morning or evening. Generally speaking, the sky was clear, and the sun shining in the heavens like a globe of fire. So powerful were its rays, that even in December or January it was disagreeable to walk in it without a lined parasol or umbrella. Owing to the power of the sun, the freedom from fog, the slight amount of rain, and the dry, rocky character of the soil, the air was usually very dry; so much so, that a wet towel would dry in the open air, out of the sun, within an hour or less, at any time in the winter, except when it rained or the sky was obscured.

And yet it was winter at Mentone. The nights were cold, the thermometer generally falling to between 40° and 45°, and sometimes, in bad weather, below 40°, during four months—December, January, February, and March. During the day it was generally cold in the shade and when the sun was obscured by clouds, and it always became cold as soon as the sun went down. The heat was evidently sun heat. In a south room, whenever the sun was on the room, the window could be left wide open, and, without a fire, the thermometer generally remained at 60° or thereabouts. As soon as the sun disappeared, however, the window had to be shut and a good fire lighted. In midday, also, the north rooms on the same floor during these months, were generally six, eight, or ten degrees colder than the south. Again, immediately after the sun disappears behind the mountains there was generally a difference of eight or ten degrees in the temperature of the atmosphere; and whenever the sun was permanently obscured by clouds, it became chilly and cold, and the complaints against the climate were loud and numerous. Fortunately the bad weather never lasted more than three, four, or five days. At the end of that time the sky was again clear, the sun again careered through the heavens like a blazing fire; in a couple of hours the ground was dry, and out-door life again began.

The vegetation showed the influence of a powerful sun warming a chilly atmosphere. The deciduous trees lost their leaves in December, as soon as the nights became cold, and did not regain them until April, when they were becoming warmer. The green forest-clad appearance of the hills and valleys in midwinter was owing entirely to the evergreen, olive, orange, and lemon trees. The few deciduous trees were mere dry sticks until April. On the other hand, in sheltered situations exposed to the south, the heat of the sun during the day so warmed the soil that it had not time to cool at night, and such situations become regular forcing-beds, producing violets in December, anemones in January, and all our spring flowers early in February. Where the sun did not penetrate, on the other hand, the ground-vegetation remained torpid, like the deciduous trees, till March. As, however, the sun-exposed localities were very numerous on the sheltered lower hills and in protected valleys away from the sea, the ground-vegetation early became very luxuriant and abundant, offering great resources to the botanist and florist. Indeed, in the warmer valleys the only winter was the rainy days.

From what precedes, it will be perceived that the characteristics of the climate of Mentone, as evidenced during last winter—an unusually severe one,—were the following: the absence of frost; the absence of frogs; the paucity of rainy days; the clearness of the sky; the heat and brilliancy of the sun when it did not rain; a rather cool or chilly night-temperature; a bracing coolness of the atmosphere, throughout the winter out of the sun's rays; and when, on the contrary, the sun was obscured by clouds, and rain fell, as miserable and chilly a state of things as a drizzling November day in England. As, however, during nearly six months, rain only fell, on twenty-nine days (about one in six), and then often not during all the day, and as the other days were uniformly bright, clear, and sunshiny, five days out of six, throughout the winter, exercise in the open air could be prudently taken, with great satisfaction and benefit, and that from breakfast to dinner. Notwithstanding the complete protection from the north and west, the wind was often very high; it generally seemed to come from the south-east, the open quarter, probably owing in part to the land-locked character of the district; but even when it was present, the mountain valleys and the more internal hills were quite sheltered and protected. There certainly was, however, anything but the atmospheric stagnation which has been mentioned as peculiar to Mentone. The second or eastern bay was decidedly better protected from wind, and appeared to be warmer also, than the western, owing to the mountain rising immediately behind the houses which line the shore.

Such a climate is a favorable specimen of what botanists call the warmer temperature zone. Plants live which frost kills; many annuals in a colder region become perennials; and many forms of vegetation new to the more northern flora make their appearance. It is the Mediterranean climate, but that of the more favored Mediterranean regions. In Italy, for instance, the most protected southern parts must be reached to find the same immunity from frost. Mentone, also, is a little warmer, and more protected from wind, than its neighbor Nice, and much more so than Cannes, although the general features of the climates must be the same, for they are only a few miles apart. It is the question of fruit walls in the same orchard, one a little more sheltered and protected than the others, but all being turned towards the south. At Nice, however, there are situations, such as the Cinney and the Carabacel, for instance, in which the protection is greater than in the town itself, and which thus assimilate to Mentone.

The foreign population at Mentone numbered about three hundred, and contained representatives of nearly all the European nations. The French and English were, however, the most numerous, each family generally containing one invalid. Most of the latter were suffering from pulmonary consumption. The results of their winter's residence were such as might be expected, from the above details. Those who were in the early or even secondary stages of the disease, and had vitality and constitutional stamina left, mostly did well. I saw in several young females well-marked, crude tubercular deposits disappear, gradually absorbed. In several cases of accidental phthisis in middle-aged, over-worked men, the amelioration was still more apparent. Well-marked cavities became partly or entirely cicatrized, and the constitutional symptoms gradually subsided, the general health and strength steadily improving. Those who were in the latter stages of the disease, on the contrary, appeared to derive but little benefit from the change. The disease seemed to progress slowly, but steadily. They suffered from the cold and the wind, and especially from the occasional outbreaks of wet, chilly weather. Moreover, they felt bitterly the absence of home comforts, and their separation from friends. Several dropped off in the course of the winter, as they would have done at home, from hæmorrhage, from pleurisy, from bronchitis, or diarrhœa. In their case, it appeared to me that little was gained by the change of climate. They could not avail themselves of its bracing capabilities for out-door life and enjoyment, and felt the variations, against which they could not protect themselves as well as at home. Such patients, I should say, are better at home, or in a warmer climate than that of Mentone, or Italy generally—Madeira, for instance, where the temperature is said never to fall below 56°.

Several patients who always suffered from bronchitis in England, were quite free from it at Mentone, owing probably to the dryness of the atmosphere. This remark applies to other similar climates. I met an old friend at Nice, a London physician, aged fifty-four, who abandoned London four years ago, owing to repeated attacks of winter bronchitis, which at last led to very serious complications. He made a winter settlement at Nice, and has there passed the cold season ever since, perfectly free from all bronchial mischief, and in flourishing health. In several cases of this description, the attempt to spend the winter in England was attended with a return of the bronchial affection with its usual severity. In one phthisical case that I saw, a gentleman aged forty-four, with softened tubercles, who had suffered from sore-throat and bronchitis for nearly four years in England, lost all cough and laryngeal irritation after three months' residence at Mentone, and had no return during the winter or spring.

It is easy to understand that a dry, bracing, cool, invigorating climate such as I have described should have a beneficial influence on the respiratory mucous membrane of the persons who have still some of the vital power of youth or some constitutional stamina left. When we add to this, all but daily exercise in the open air throughout the winter, in the midst of magnificent scenery, removal from the cares, anxieties, and duties of ordinary life, pleasant social intercourse with fellow-sufferers and their families, all tuned to the same unison of cheerful and hopeful resignation, we certainly have united all the higienic influences calculated to renovate the general health, and to arrest the development of tubercular disease. Indeed, to me, it is a question whether a warmer and milder winter climate, which is only to be found in a tropical or sub-tropical region, is not less favorable to the recovery of health under such circumstances, always provided rigid attention be paid to the precautions necessary in a climate where the temperature so constantly varies. Heat and moisture debilitate and relax the economy; moderate cold and a dry atmosphere invigorate and strengthen it; and, in the treatment of phthisis, the renovation of the general constitutional health is of primary importance.

To derive that benefit, however, from the climate of Mentone, and of the south of Europe generally, which it is capable of affording in pulmonary consumption, the most rigid adherence should be paid to the hygienic rules peculiar to these regions during the winter season. It should never be forgotten that in winter the heat is sun-heat, and that the air, barring its influence, is usually cold. Warm clothes and woollen outer garments should be used. In dressing for out of doors, a thermometer, placed *outside a north room*, should always be consulted. The hours for out-of-door exercise should be between ten and four, and the return should be so arranged as to secure the arrival at home before sunset. The Italian physicians appear to attach a mysterious noxious influence to the hour of sunset. In such a climate as that of Mentone, Nice, &c., I am persuaded the danger is merely in the sudden lowering of the temperature after sunset, which exposes to sudden chills, from the pores of the skin being often open at the time through previous exercise. As the same danger exists even in mid-day in passing accidentally from the sun to the shade, it is always necessary to be dressed for the latter. The invalid should inhabit a south room, and never go into a north room unless previously warmed by a fire. The one is summer, the other winter. When the weather is bad, he should make a large fire, and rigorously stay at home until it changes. Sunshine and warmth are sure soon to reappear, and thus to bring the confinement to a close. After two or three days of chilly rain, sore-throats and colds begin as in England, but then the sun again shines, and they usually die away.

All dinner and evening parties should be strictly forbidden. The invalid must be in by sunset, and not leave home again until the following morning. The improvement will be generally the more decided the more these rules are observed. Lastly, exercise and out-door life must not be carried so far as to produce permanent lassitude. Several of the patients around me, and I myself, fell into this error—one easily committed, owing to the great attractions to out-door life, and the injunction generally made to take daily exercise if possible.

With these precautions, the climate is safe and beneficial; without them, it is unsafe and treacherous. This is evidenced by the great mortality of the natives of the Nice and Mentone districts, and of Italy generally, by pneumonia and pleurisy, two of the commonest maladies. Being badly clothed, never making fires, and ignorantly braving these atmospheric changes, the lower orders are constantly exposed to chills, and succumb in great numbers to these maladies, treated as they are, by bleeding every few hours. Persons in the latter stages of phthisis more especially suffer from the slightest dereliction of the above rules, which they are not always the most careful to follow.

The exceptionally mild climate of Mentone, even for the latitude in which it is placed, is the result of a double cause. It is occasioned, on the one hand, by the complete protection afforded by the Maritime Alps from the north and northeasterly winds; on the other, by a direct southern exposure, and by the prevalence in these seas of south-westerly winds. The entire western coast of Italy participates, but in a less degree, in these advantages. The protection from the north-east throughout this coast is afforded by the Apennines, which divide the peninsula from north to south, like a midrib. As a result of this disposition the western coast of Italy is much warmer in winter and cooler in summer than the eastern. The latter, not being protected by the Apennine chain, is exposed to the full influence of the north-easterly winds, which blow from Continental Europe, and which are both very cold in winter and very warm in summer.

The resources of Mentone for visitors are entirely in the out-door life. The scenery, as I have stated is most grand and imposing in the mountain background, and most picturesque and romantic in the nearer hills and coast outline. Every ravine, every valley is a path of great loveliness, ascending gently towards the higher range. The flora is very abundant, and most of our garden spring flowers grow wild in great luxuriance. The geological aspects of the country are very instructive, and afford occupation and amusement to those interested in such pursuits. The great invalids mostly kept to the sea-shore; those who were stronger mounted sure-footed donkeys, and ascended the mountain paths as far as their strength permitted; whilst the robust and valid members of the community tried their pedestrian powers by ascending the higher mountains in various directions. Whenever the sun shone there were protected valleys and sunny mountain nooks, where at all times, in December or January, as well as earlier, we were sure to find warmth, a quiet atmosphere, and flowers. What with these occupations, books and newspapers interchanged, and the harmonious intercourse of countrymen united by the the bond of common origin and suffering, the winter passed pleasantly along, merely saddened occasionally by the loss of one of the more hopeless sufferers.

There is an English clergyman, the Rev. Mr. Morgan, settled with his family at Mentone, where he has built a house, whose kind and intelligent sympathy is always enlisted in behalf of his countrymen, and whose presence is a boon to all. Each season since the English began, three or four years ago, to visit Mentone, has brought one or more English physicians, either as the companions of sufferers, or as invalids themselves, and the principal Italian physician, Dr. Bottini, is a skilful and experienced practitioner.

There are now many pretty and commodious villas and apartments to let furnished. There are also three hotels and two boarding-house hotels. Chlericy's Hotel de la Pension Anglaise, where I myself spent the winter, is the largest and best modern house in Mentone, and admirably situated. In these latter establishments, the terms are about seven francs a day; in the hotels, rather more. The road to Mentone is by Paris, Marseilles or Toulon, and Nice; the expense from £10 to £15.

In conclusion, I may add, that I myself was so well pleased with Mentone that I should return there, were it not for the love of change, which will probably impel me, next winter, to Algiers or Spain, in search of a still better climate. Should I discover such a one, I shall not fail to communicate the discovery to my readers. The desire for change is quite a feature in the invalid population one meets with in the south of Europe It is probably beneficial in its operation, by giving the mind fresh objects of interest to take the thoughts from self, and from the many sacrifices which the health exiles from home and their companions have to make. The difference between the smiling sunshine of a Mentone winter (a mere long English October) and our eight months' dismal winter season is very great, and yet there were few of the cheerful Mentone exiles who would not gladly have returned to our cloud-obscured island, had it been prudent and possible.

The Ferns, Weybridge, Surry, 1860.

CLINICAL REPORTS OF SOME DISEASES OF THE RECTUM, &c.

By I. Baker Brown, Esq., F.R.C.S. (Exam.)

In my work on "Surgical Diseases of Women," I have a chapter on "Diseases of the Rectum resulting from certain Conditions of the Uterus." I now propose to record, very briefly, a few clinical reports of diseases of the rectum which produce certain symptoms that have been ascribed to diseases of the uterus, thus more fully proving how certainly one part is influenced by the other through the vascular and nervous systems; the practical conclusion being, that the surgeon should always examine both uterus and rectum.

Case 1.—L. P——, aged twenty-five, single, admitted into the London Surgical Home Dec. 22nd, 1858. She complained that she had suffered for a long time from heat and pain in the womb, with pains in the back, and a general feeling of uneasiness in her bowels. She looked ill and worn, and was suffering much from dyspepsia. She had been treated by leeches to the uterus, for dyspepsia, and for the uneasiness in her bowels, but without deriving the least benefit. On examining the uterus, no disease could be found; menstruation was regular; there was slight leucorrhœa. On inquiry if she had more pain at the time of, or after, an action of the bowels, she replied, "Yes, always; that then she had a sharp shooting pain darting through the womb, and that she was obliged to lie down because the pain and uneasiness were so great in her bowels; in fact, that she dreaded going to the watercloset." On passing my finger into the rectum she complained of acute pain, and I found a deep fissure just within the sphincter, and opposite to it a small pendulous polypoid body, the pea-like end of which dropped into the fissure.

Treatment.—A dose of castor oil was ordered early in the morning on the following day, and after it had acted freely the rectum was well washed out with warm-water enemas; the fissure was then divided by Copeland's blunt-pointed straight bistoury, the polypus tied, and the rectum plugged with lint soaked in sweet oil. Two grains of opium were given, and generous diet ordered.

Dec. 25th.—The bowels were opened by a castor enema; afterwards the nurse applied sweet oil on her finger to the whole cut surface, and repeated it once daily.

Jan. 6th, 1859.—Discharged, quite cured. I have heard of her since as continuing perfectly well.

Practical remarks.—This case well illustrates the proposition which I have just advanced. I would also wish to observe that a very large number of fissures of the rectum are produced by these little polypoid bodies, as they will be found in almost every case if carefully sought for. It will be observed that the dressing of lint and oil was never repeated. This has been my invariable practice for the last twenty-five years, having been taught the great practical fact by my esteemed friend, the late Dr. Copeland, that it is never necessary to interfere with the parts by the painful process of reintroducing the lint, if care be taken that the first dressing be left in for forty-eight hours; after that time there is no fear of union by first intention, but, on the contrary, a healthy granulating process is set up, which continues till the end.

Case 2.—Emma C——, aged forty-two, married, mother of eight children, admitted into the London Surgical Home on the 11th of June, 1859. She complained of having suffered for a long time from pain and bearing-down of the womb, and also from piles since her first pregnancy, twenty-two years ago. Finding there was no disease of the womb to account for her suffering, I inquired if she suffered much pain on defecation, and she replied, "Yes; that when her bowels acted she had great pain: and that as they were generally in a torpid state, she was constantly obliged to take aperients." On examination of the rectum, some old external piles were found, covered by skin, and within the sphincter some internal piles; at the root of one of them a deep fissure was felt, and opposite to it a large polypoid body.

June 16th.—External piles cut off, internal piles tied, fissure divided, and polypoid body twisted off at its root. The after-treatment the same as before.

July 16th.—Discharged cured.

Case 3.—E. F——, aged thirty, married, mother of two children, admitted into the London Surgical Home on the 8th of December, 1859. She has been suffering for the last four years from pain in the womb, sensations of bearing-down, pain in the back, general lassitude, and inability to perform her domestic duties. She had been in an hospital for a month, and was dismissed because she was supposed to have no disease—in fact, that she was shamming illness. On examination, the uterus was found healthy; but on examining the rectum, the same condition was found as in Case No. 1.

Assisted by my colleague, Dr. Hall Davis, I divided the fissure, &c. In a fortnight she was out walking, in a month she left the hospital, and I have since heard of her as being in pefect health, and performing actively her domestic duties.

Case 4.—M. R——, aged thirty-five, married, was admitted into the London Surgical Home on March 14th last. For several years she had suffered intense pain about the uterus and rectum; and for the last three years has had caustic applied to the uterus twice a week, but without the slightest alleviation of her painful sufferings. She had been in the habit of taking three or four grains of opium a day, and her general health seemed completely broken down. On examination, an old fissure of the rectum was easily found, situated behind two large piles.

March 22nd, 1860.—The fissure divided, and the piles removed.

24th.—The bowels relieved with less pain than she had had for many years past.

April 4th.—Discharged, quite cured.

Remarks.—It will be observed, that when the bowels were relieved, only two days after the operation, she had a marked cessation of pain. This is invariably the case, and is a most cheering fact to both the surgeon and the patient.

Case 5.—H. A——, aged forty-three, single, a lady from the country, had been suffering for some years from supposed uterine affection, and had had leeches and caustic applied to the uterus, but still derived no benefit. On examining per vaginam, I could find no disease or anything that required treatment. Menstruation was regular. On inquiring if she felt any pain on defecation, she replied, "Yes frequently: sometimes acutely." On passing my finger within the sphincter, I found a painful fissure, opposite to it a small polypoid body, and two internal hæmorrhoids. I advised that she should stay in town; and, after two or three aperient doses, that she should undergo the usual operation. This was done, and in ten days she was up, feeling quite well, and in a fortnight left town without an ache or pain in uterus or rectum. Two years have elapsed since, and she has continued perfectly well. She has frequently expressed her surprise that she had never been so thoroughly examined before when seeking medical advice.

Case 6.—P. C——, a lady from the country, married, without children, had been for many years suffering from what she considered uterine disease, accompanied by painful menstruation, which was supposed to arise from constriction of the os and cervix uteri. Leeches, sponge-tents, and uterine dilators were from time to time persevered in. Still she kept getting thinner and weaker; and from having been accustomed to ride on horseback, and to take much out-of-door exercise, she was unable to do either, constantly reclining on her sofa, and being, in fact, a confirmed invalid. On inquiring if she suffered pain on defecation, she replied, "Yes, so much so, that she always dreaded any action of the bowels, and was obliged to take strong aperients; that then the pain extended a long way up the bowels, and left a long, wearying, aching pain, which always made her feel sick and faint for some hours afterwards." On examination, I found the same condition of rectum as in the last case; but the fissure was deep, and evidently of long standing, and the sphincter itself was so firmly constricted as to admit with difficulty the point of my finger. I confidently promised a speedy cure if she submitted to the necessary operation. This she did on the 2nd ultimo, and on the 4th, her bowels were relieved by castor-oil enema, and an enormous quantity of feculent matter removed. On the third day the bowels were also moved after a small dose of caster oil. The patient then, to her intense delight, found that she had none of her old painful sufferings. Since then she has steadily and gradually progressed in health and strength. Her face, which had been thick and muddy, is now clear and bright, indicating all the signs of returning health. I could easily increase the number of these cases from my note-book.

Remarks.—Each of these cases clearly illustrates the proposition with which I started, and has a strong practical bearing to every obstetric surgeon. Cases of rectum disease, even without fissure—such as old and hardened polypus, stricture, prolapsus ani, internal hæmorrhoids,—all produce more or less pain to the uterus, and are frequently overlooked because the uterus itself is supposed to be the source of suffering.

Connaught-square, August, 1860.

St. Thomas's Hospital.—The Committee of this institution have just elected their two assistant-physicians (Dr. Peacock and Dr. Bristowe) and Dr. Brinton a physician to the Hospital. Dr. Clapton and Mr. Sidney Jones have been elected assistant-physician and assistant-surgeon respectively.

A Mirror
OF THE PRACTICE OF
MEDICINE AND SURGERY
IN THE
HOSPITALS OF LONDON.

> Nulla est alia pro certo noscendi via, nisi quam plurimas et morborum et dissectionum historias, tam aliorum proprias, collectas habere et inter se comparare.—Morgagni. *De Sed. et Caus. Morb.*, lib. 14. Prooemium.

WESTMINSTER HOSPITAL.

LATERAL DISLOCATION OF THE KNEE-JOINT, WITH THE FORMATION OF A FOREIGN BODY; SYNOVITIS; RECOVERY.

(Under the care of Mr. Holthouse.)

When the size and breadth of the knee-joint are taken into consideration, it may be readily understood that dislocation will very seldom happen, unless as the result of direct violence. Of the various displacements which have been noticed, the lateral is the most common, and does not require the same amount of violence to produce it as in the anterior or posterior directions. In certain instances, dislocations have slowly arisen as the result of old-standing disease. This special deformity is one not commonly encountered in hospital practice; but we have recently met with an instance at this hospital, which we put upon record to-day, and we learn that two cases have occurred at Guy's within the past twelve months, under Mr. Poland's care.

The complications which arise in dislocation of the knee are always of more serious import than those of any other articulation; for the laceration of the ligaments, if present even to a moderate extent, is followed by some amount of inflammation, which, in certain constitutions, may lead to the gravest consequences. Under any circumstances, the sufferer has to remain under treatment for a considerable period before strength is restored to the joint.

In the following case, besides the usual laceration of ligamentous structure, there appears to have been the detachment of a portion of bone, or possibly of one of the semilunar cartilages, which for the time became a foreign body. This may give rise to much trouble and inconvenience at a later period. For the present a recovery has been made, with some amount of stiffness and swelling around the joint.

Henry W——, aged forty-seven, coalheaver, was carrying a sack of coals on his back across a plank to a barge, on the 12th of last December, when his foot slipped and he fell backwards. In endeavoring to save himself he injured his left knee-joint, but the exact mode by which the injury occurred he is unable to explain; he only knows that, when he rose from the ground, he was unable to support any weight on the left leg, and he was immediately carried to the hospital. On examination, the house-surgeon (Mr. Clarke) found the tibia dislocated outwards, and reduced it immediately, without the least difficulty, by slight extension and counter-extension made from the leg and thigh. When seen by Mr. Holthouse shortly afterwards, the bones were in position; the joint was somewhat swollen, from the effusion of fluid within the synovial membrane; and there was found a loose angular body, about the size of an almond, occupying the joint, and situated on the inner side of the patella. The patient suffered but little pain, though the joint became rapidly distended with fluid. The limb was put up on a M Intyre's splint, and lint dipped in an evaporating lotion was applied to the knee.

Dec. 13th.—An opiate was given last night, which procured the patient a good night's rest, and the joint, though much swollen, is not very painful; there is little or no constitutional disturbance. To have a compound senna draught to-morrow morning should the bowels not have acted. He is on middle diet, and takes a pint of porter daily.

16th.—The fluid in the joint is much diminished, and the foreign body is distinctly felt in the same situation; he has no pain, but complains of lowness of spirits. Full diet was ordered, and another pint of porter.

The patient continued to improve, exhibiting no untoward symptom, and on Jan. 14th the splint was removed. The knee, though quite free from inflammation and pain, was somewhat stiff and swollen, the swelling being apparently external to the joint, and preventing the foreign body within from being easily recognised. On Jan. 21st he was allowed to get up and walk about the ward. He complained of nothing but the stiffness of the joint and a general feeling of weakness. Stimulating liniment was directed to be rubbed well into the joint night and morning, and a warm bath prescribed every other day.

March 6th.—Though he has continued using the remedies just mentioned, the joint still remains very stiff, and the soft parts around are swollen and indurated. A blister was ordered to be kept open with savine cerate.

26th.—The blister has now healed, and the joint is somewhat smaller than before its application, though still larger than the other. The movements of flexion and extension are limited, but performed without pain; he walks tolerably with the aid of a stick, and is in fair health. Discharged.

GREAT NORTHERN HOSPITAL.

FOURTEEN STONES IN THE BLADDER OF A MAN, AGED SEVENTY-TWO; LITHOTOMY; UNSUCCESSFUL RESULT.

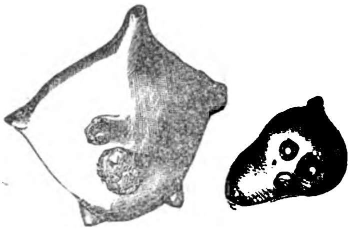
(Under the care of Mr. Price.)

In a previous number we recorded the history of a case of unusually large stone in the bladder of a boy, which was successfully removed by Mr. Price, and since then another instance has come under our notice, in which we saw as many as fourteen stones removed by him from the bladder of an old man. Now, although the number of calculi was so large, the peculiar shape of the larger ones was even more remarkable. This is well shown in the accompanying woodcut. The largest stone resembled a circular ball, with a number of spines projecting from various parts of its surface, which would naturally give rise to great irritation.

For the following notes we are indebted to Mr. Wallis, house-surgeon to the Hospital:—

W. A.——, aged seventy-two, a healthy-looking old man, who has always, with the exception of the symptoms for which he was admitted, enjoyed remarkably good health, states that about thirty years ago, to use his own expression, he first noticed something coming with his water, attention being drawn to the fact by the invariable experience of pain in the region of the bladder and penis just before and during the time of micturition. The pain was relieved after the bladder was more or less emptied. There was no increased desire for frequent micturition. He was disturbed neither day nor night, except by the pain, which became more severe in proportion as the bladder extended. He continued suffering the same pain and symptoms, at times more or less severe, till two years ago, when both considerably increased. And others still more distressing gradually made their appearance. The bladder became more incontinent of urine, and constant pains, shooting down the thighs and about the perinæum, kept him awake at night. At this period he sought surgical aid, and was treated for stricture, wax bougies of a small size being constantly introduced; but these, instead of alleviating the urgent symptoms, rapidly increased them, as the urethra had proved unnaturally sensitive. No sound was ever introduced. He remained for six months under the notice of the surgeon to whom he had first applied; but finding no relief, he discontinued both mechanical and medicinal treatment. Some months elapsed, when he applied to Dr. Chance, who, finding his symptoms were so severe, and apparently beyond the reach of all medicines except palliatives, recommended him to see Mr. Price. At this period the symptoms of stone seemed permanently marked, and a sound was accordingly introduced when a calculus of large size was readily detected. In a few days he was sounded with still greater care, and the nature of the affection under which he was suffering being more clearly defined, he was recommended to undergo an operation, especially as his life wsa fast ebbing out, and the pain was daily becoming more and more unbearable. Lithotrity was for several reasons an inappropriate operation, and accordingly lithotomy was adopted.

On April 5th, the man having been placed under the influence of chloroform by Dr. Anstie, the lateral operation was performed. At the first scoop with the forceps six or eight small pea-like stones were caught and removed. At the next manipulation of the forceps, six more were taken away, and, at a later stage of the operation, the two calculi represented in the accompanying sketch were extracted. In drawing the larger of these two stones through the prostate, some difficulty was experienced by reason of one or more of the spines which surrounded the calculus catching in the glandular track. There was little or no bleeding, and the patient was removed to bed. He quickly rallied, but did not pass a good night. On the 2nd and third day after the operation, he declared himself better, and was doing well; but, on the evening of the fourth day, he complained of a heavy, dull pain in the hypogastric space. He slept, however, comfortably during the night; little urine passed by the wound; and the next day, retention having occurred, Mr. Price drew off the urine, which was stale, strongly ammoniacal, and rather bloody. Later in the day the instrument was again introduced through the natural passage, and retained in position. At this time the man was much lower, the bowels had lost their natural tone, bed-sores began to form, the wound was sloughy and unhealthy, and the rectum was destroyed at one spot by ulceration. A restless night was passed, and the man died the next day at 4 P. M. No postmortem examination was allowed.



The accompanying woodcut represents (somewhat smaller, the two largest of the fourteen calculi. The larger of the two is not quite spherical, but nearly so; its surface is surmounted with some eight or ten spines, varying from an eighth to nearly a quarter of an inch in length, and an eighth of an inch in thickness, which give to the calculus the appearance of a spiked shot. The smaller stone has likewise these spikes or spines in the course of formation.

On examining the composition of the calculi, they are *all* found to be composed of lithic acid, which has formed around a nucleus of oxalate of lime or mulberry, and become covered with phosphate of lime and other phosphatic salts—at least the larger ones, the smaller retaining the smooth and glistening appearance of uric acid. On making a section, the above composition was determined, and a commonly-received opinion, that the spines on the larger stone were due to the peculiar crystallization of oxalate of lime, controverted. The spines appear to be wholly composed of lithic acid, and their formation is most beautifully seen on examining the section. It is difficult to arrive at the correct mode or cause of formation of these spines. It is, however, probable that the stones might have remained for long in the pelvis, of the kidney, from which undoubtedly they came, although the patient had never suffered from irritation of the kidneys or ureters. It has been suggested that the peculiarity of form is due to the stone being long resident in a vesical pouch; but the readiness with which it was caught shows that such, indeed, if any other proof were wanting, could not be the case.

The two largest calculi are figured, as their peculiar form and condition are more readily perceived.

ST. MARY'S HOSPITAL.

ASCITES ORIGINATING WITHOUT ANY RECOGNISED CAUSE, AND YIELDING TO THE EMPLOYMENT OF TONICS.

(Under the care of Dr. HANFIELD JONES.)

ASCITES unconnected with renal, hepatic or peritoneal disease is certainly not of common occurrence. Dr. Copland notices asthentic or passive ascites as one of the idiopathic varieties, but states that it is usually attended with œdema of the ankles, feet, and legs. He recommends, besides other means, opium with diuretics and tonics. The *causa morbi* in the following case may have been scarlatinal poison, but the state of the urinary secretions is unfavorable to that view.

Stephen J. C——, a boy, aged three years and a half, whose parents were not in distressed circumstances, but rather the reverse, was admitted into St. Mary's Hospital on May 9th, 1859. He had been ill three weeks; his abdomen had enlarged gradually without pain or tenderness, and no other sign of disease was noticed previously. His appetite had been bad all the time, and he had emaciated much. Another child had died lately, in two days with enlarged abdomen. He had been under the care of a practitioner, who had wished to perform paracentesis, to which the mother was afraid to consent. The tongue was clean; bowels relaxed five or six times a day. The heart's sounds were normal, and there was good breathing in both backs. The feet and legs were not swollen. The abdomen was considerably distended, dull, and fluctuating; resonance perceived only in the epigastrium; the upper side in lateral decubitus did not become resonant. The liver did not project below the ribs. To have grey and Dover's powder, two grains of each, three times a day, and also small doses of the iodide and nitrate of potass in carraway-water as frequently.

May 12th.—The urine was examined, and noted as scanty, lateritious, and free from albumen. The powders were changed for mercurial ointment, to be rubbed on the abdomen, and a saline mixture containing acetate of potassa and nitric ether with tincture of digitalis (three minims) was ordered, four times a day.

16th.—Tongue clean; skin cold; pulse weak; bowels relaxed, with green stools, till he had some astringent powders; urine scanty and thick; abdomen distended as before. He is now ordered infusion of digitalis and scoparia with acetate of potassa and nitric ether, and compound tincture of iodide to the abdomen.

On the 18th, as there was no improvement, a trial was made of one-sixth of a grain of tartar emetic thrice a day, and a blister applied to the loins. This was done with the view of relieving renal congestion, which seemed probable, as the diuretics produced no good effect. This also failed, and on the 21st, on account of restlessness at night, he was ordered to have one grain of disulphate of quinine at bedtime, and no other medicine.

23rd.—Much more cheerful; appetite better; sleeps very soundly, but perspires then very much. Urine very alkaline, scanty, and thick; deposits phosphates, and contains a large quantity of carbonate of ammonia. The case now began to clear up. To continue the quinine, and five minims of tincture of muriate of iron thrice a day; to which, on the 30th, three minims of tincture of digitalis were added.

During the last fortnight of treatment he had five minims of tincture of muriate of iron and half a grain of disulphate of quinine three times a day. From the time he commenced the tonics his improvement was steady and rapid. He was discharged, quite well, on July 7th; and fourteen days before, he was reported by his mother to be in much more perfect health than he had been for a long time, even than before his illness; he was much more lively, running about, and eating heartily. The abdomen, also, the mother thought, was smaller than it had been before he was taken ill. The urine under the tonic treatment became more copious and acid, and ceased to effervesce with the nitric acid. It was never found albuminous. On May 26th the left flank was notably duller than the right, owing, no doubt, to distension of the cæcum and ascending colon. On May 30th this was reversed, the left flank having become resonant and the right dull. Position, of course, was excluded as a cause. At the same date, the abdominal distension having diminished but little, the superficial abdominal veins were noted as large.

This case is a good evidence of the advantage of conducting treatment according to rational pathology, and not by mere routine. If diuretics had been persisted in, the case would surely have ended badly. The timely administration of tonics, by giving vigor to the system, enabled the various organs, and amongst them the kidneys, to do their work better, and the result was a good recovery. The tonics were thus indirectly diuretics.

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ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.

DISLOCATION OF THE CRYSTALLINE LENS INTO THE ANTERIOR CHAMBER OF THE EYE DURING A FIT OF SNEEZING; SUCCESSFUL EXTRACTION.

(Under the care of Mr. Jabez Hogg.)

Through the kindness of Mr. J. J. Skegg, house-surgeon to this hospital, we place upon record the following rare and most interesting case. A violent fit of sneezing appears to have dislocated the crystalline lens into the anterior chamber of the eye, causing subsequent pain of the most agonizing character, which for a time nearly drove the patient out of his mind. A good recovery was made after the extraction. Amongst the causes enumerated by various writers as giving rise to displacement of the lens are, falls on the soles of the feet or on the head, violent blows on the temple or other parts of the head, and direct injury to the globe of the eye. The present case is probably one of the first, if not the first, recorded in which it arose after a fit of sneezing, in an eye disposed to such an accident. The case likewise shows the value of the ophthalmoscope in determining the cause of the indistinct vision in the other eye, which had been previously unsuspected.

A. B——, aged thirty-six, a German, had always been myopic. Two months ago, the sight of the left eye became unusually acute, so much so that objects appeared as though seen through a magnifying-glass, the nose seeming to him very prominent, and thereby causing much discomfort. On the 18th of April he was taking a walk, the sun shining strongly on his face, when suddenly he felt as though blinded in the left eye; he immediately put his hand up and rubbed it. It should be stated that just previous to this he had a violent fit of sneezing. The sight of the eye was not lost, but he became very near-sighted. He was seen by Dr. Grasemann soon after the accident, and by his advice he consulted Mr. Hogg. The lens were distinctly seen in the anterior chamber, and had a most beautiful appearance. Mr. Hogg recommended the pupil to be kept dilated by atropine, and the patient to remain in the recumbent position; but, however, he would not consent to the confinement. On the 26th of April inflammation set in, with photophobia, and the night was one of most intense suffering, so much so that he attempted to jump out of the window. Leeches were applied to the temple, morphia taken in large doses, and subsequently chloroform administered, but without alleviation of the extreme pain. On the 27th, nine days after the accident, he was admitted into the hospital, when Mr. Hogg extracted the lens under chloroform. The operation was obliged to be very quickly performed, as the anæsthetic produced very alarming symptoms. At seven P.M. he was comfortable and free from pain.

April 28th.—Had a good night, without the administration of an opiate.

29th.—Still remains easy and free from pain.

30th.—Did not pass quite such a good night, but on the whole he is going on well.

May 4th.—To-day the eye was opened, and found to be progressing favorably.

11th.—A small piece of the iris has cicatrized in the wound of the cornea. To be gently touched with the nitrate of silver, and a drop of sweet oil applied to the eye afterwards. The sight remains very good.

13th.—Being very anxious to go out, he was discharged, and has since quite recovered.

The lens, after extraction, was perfect and transparent, apparently uninjured, except in form. When the eye was first examined—that is, two days after the accident—neither the vessels of the retina nor of the choroid were changed, or in any way congested. The lens, in the anterior chamber, pressed upon the iris, producing considerable concavity, and, acting as a foreign body, was the cause of the ciliary neurosis and torturing pain. It should be mentioned that the sight of both eyes, more especially that of the right, had been weak for several years, for which he had consulted more than one ophthalmic surgeon in his own country; but, until he was examined with the opthalmoscope by Mr. Hogg, he was not aware that one-half of the lens in the right eye was opaque; consequently, he could only see through the crescentic half of the lens on the nasal side; and this at some future time will require extraction.

ACUTE GLAUCOMA, SHOWING THE VALUE OF HANCOCK'S OPERATION OF DIVISION OF THE CILIARY MUSCLE.

(Under the care of Mr. Hancock.)

In a former "Mirror," we placed upon record an example in which the most marked relief was afforded by the operation which now goes by the name of Mr. Hancock, and which consists of a division of the ciliary muscle. The nature of the operation, and the cases in which it is especially applicable, have been clearly set forth in Mr. Hancock's "Practical Clinical Remarks," which have appeared in recent numbers of this journal, to which we must refer our readers. The success which is there announced as having resulted from its adoption in several cases of acute and chronic glaucoma, and other intractable eye diseases, is most gratifying.

Of the value of Mr. Hancock's important and successful operation of division of the ciliary muscle, we have now abundant evidence; and we record an illustration (selected from amongst a number in the Westminster Ophthalmic Hospital) which we had the opportunity of personally examining, and of witnessing the good effects produced, in a female of nearly sixty years of age, affected with acute glaucoma. The patient was blind on admission, but in three weeks she was able to read large-typed words in the Bible. It was a case well verifying Mr. Hancock's views.

A surgeon, recently writing from Paris, assured Mr. Hancock that he had the satisfaction of receiving M. Desmarre's testimony regarding the results of this operation in a case of glaucoma in which he had tried it. It was described as a very bad case, and the effects of the operation were all that could be desired, quite as complete as after the performance of iridectomy. It was the intention of M. Desmarres to continue the practice, more especially in his bad cases, one-half of which he should treat by paracentesis, the other half by Mr. Hancock's method. In our recent "Parisian Medical Intelligence," the successful result of the latter procedure in a case of acute glaucoma of extreme severity, in the hands of M. Desmarres, is thus announced: "Within twelve hours of the operation all the symptoms had improved, and at the present moment (it is now five weeks since the event) the patient is fully as much benefited as if the most successful iridectomy had been performed." It will be seen, therefore, from the results already obtained in London and elsewhere, that the success of the operation is established, and Mr. Hancock has thus rendered a most important service to ophthalmic science.

For the notes of the following case we are indebted to Dr. Sansom, the medical registrar to the hospital:

Harriet B——, aged fifty-eight, was admitted into the hospital on the 21st of March. She complained of intense pain in the right globe, and throbbing pain over the brow; the sight was wholly gone; the conjunctiva was greatly congested; the sclerotic presented a purplish glow; the pupil was dilated and irregular, and the lens opaque and disorganized, presenting a greenish appearance. The light used for ophthalmoscopic examination could not penetrate the disorganizsd lens. The eyeball was exceedingly tense, but the slightest pressure caused most severe pain. The patient was thin and pale, and presented the appearance of having undergone much suffering. Her previous history was as follows:—She had never had any disease of the eye until the present attack. Three months ago the eye watered as if she had caught cold in it, but she paid little attention to this. Occasionally, towards evening, she experienced the sensation of flashes of fire before the eye, and the flame of the candle seemed surrounded by a halo of color, but all unpleasant symptoms disappeared towards morning. On the 14th of March (a week before admission) it rapidly became worse, great pain occurred over the brow, and a tense throbbing pain referred to the back of the orbit. The eye, she said, seemed so tight that it would burst. The symptoms continue to increase.

On March 23rd, Mr. Hancock divided the ciliary ligament, and a quantity of fluid and disorganized vitreous humor escaped. The eye was kept from the light.

March 26th.—The pain has entirely left her; she is able to tell the number of fingérs held up before the eye which has been operated on, the other being closed; the iris has been slightly drawn into the wound.

30th.—Pain continues entirely absent. She can now distinguish the cutline of any object, and she says that the sight is improving every day.

CHARING-CROSS HOSPITAL.

CONICAL CORNEA, IMPAIRED VISION, AND SHORT SIGHT; NOCTURNAL PAIN AND MORNING LACHRYMATION; HANCOCK'S OPERATION FOLLOWED BY GOOD RESULTS.

(Under the care of Dr. Hancock.)

The cases in which division of the ciliary muscle has been resorted to are hydrophthalmia, sclerotic staphylomata, and acute and chronic glaucoma. It has also been performed in conical cornea by Mr. Power in a female patient, aged twenty-eight, at the Royal Westminster Ophthalmic Hospital, whose case is given in Mr. Hancock's "Practical Clinical Remarks," already referred to. The following is another example of the same affection, in which the good results of its adoption have proved most satisfactory, and for the brief notes of which we are indebted to the house-surgeon of the Charing-cross Hospital:—

Ellen J——, aged sixteen years, admitted into the above hospital March 27th, 1860. She states that up to the age of three years her sight was good; but at that period she suffered from measles, which was followed by whooping-cough. From that time to the present her vision has become more and more impaired, so that before the operation she could not see the largest letters upon sign-boards at the distance of a yard or two, and when reading she was obliged to hold the bóok close to her eyes. She also suffered greatly from pain in her eyes at night and profuse lachrymation in the morning. The cornea of each eye is conical in form.

On April 12th, Mr. Hancock divided the ciliary muscle of the right eye, with great relief of the pain and improvement of vision. On April 28th, the ciliary muscle of the left eye was divided with the same success, so that the patient now has tolerable vision, being able to read a book at eight or nine inches' distance from her eyes; the cornea also looks much flattened. Concave glasses do not afford her any relief, but cause objects to appear more indistinct.

LONDON HOSPITAL.

CASE OF EXTRA-UTERINE GESTATION, IN WHICH GASTROTOMY WAS PERFORMED SIX MONTHS AFTER THE DEATH OF A NEARLY FULL-GROWN FŒTUS.

(Under the care of Dr. Ramsbotham and Mr. Adams.)

The students of this hospital were recently afforded an opportunity of witnessing the extremely rare operation of making an abdominal section, for the purpose of removing an almost full-grown fœtus, which had been without vitality for about six months, as was supposed. The precise position which it occupied is not known, but of the different varieties of ovarian, ovario-tubal, tubal, ventral, and interstitial or parietal, it is probable that the present instance may have been one of either tubal or ventral pregnancy, because the general symptoms more nearly approximated to those which characterize these two forms of extra uterine fœtation; for example, the fœtus seemed to perish at or about the time of expected parturition, a lochial discharge ensued, with the expulsion of what must have been portions of the decidua, and the breasts were full of milk.

Although the operation of gastrotomy has been performed in cases like the present *before* the death of the fœtus has occurred, a fatal result has almost invariably followed. In this case, however, it was certain that the fœtus was defunct. It is well known that nature does much towards the subsequent removal of what has become an effete and foreign body, but the process is usually associated with an amount of constitutional disturbance that eventually destroys life, more especially from the great irritation and inflammation set up in the efforts of the residual mass to reach the surface, or the rectum and bladder, for discharge from the body. To use the words of Dr. Tyler Smith, in his "Lectures on Obstetrics,"—"This process is attended by suppuration, hectic, colliquative sweating and diarrhœa, great suffering, and deterioration of the general health, which spreading over a long period, very commonly destroys the life of the patient. Cases, however, occur in which perfect recovery ensues."

The following instance Dr. Ramsbotham believes to be the second in which gastrotomy has been performed in England under similar circumstances, and it is peculiarly gratifying to know that the operation has been thus far quite successful, and everything has gone on well. At the consultation prior to the operation, Dr. Barnes expressed his opinion that the peritoneum would have to be opened. This turned out to be correct. After the operation, Mr. Adams observed that the cyst was not so adherent as he had anticipated, consequently the peritoneal cavity was unavoidably opened, but fortunately no symptom of peritonitis followed; in fact, all through the after-treatment not a single untoward symptom presented itself.

For the notes of the case, we are indebted to Mr. W. G. Payne, house-surgeon to the hospital.

Mary Ann J——, aged twenty-eight years, of middle height; states that she has always enjoyed good health, and so have her immediate relatives. Has always menstruated regularly since the age of fourteen. Has been married eight years; was never pregnant before, nor miscarried. She menstruated very profusely in January, 1859, and scantily in February, and then ceased. From March till May she was subject from once to thrice a week to severe cramp-like pains, confined to the right side of the abdomen, reaching from the pelvis to the hypochondrium; felt very sick during that period, but seldom vomited; these attacks were not regular in their occurrence, and always left a sense of soreness, lasting several days; she never had morning sickness. In June she first felt a movement as of a child; her breasts began to enlarge, milk running from them on shifting her dress, or moving; the left breast contained most milk, and the veins of the left leg and thigh became very varicose. She continued in good health; got stouter; felt the movement from day to day till October 30th. On the 27th or 28th she had a severe fall, followed by cramp and sorenss in her side, with pain running down to her knee. On the 30th she received intelligence of the death of her sister, from which circumstance she experienced a severe mental shock, though there was no new abdominal sensation of coldness, tumbling about, or otherwise. From this time forward she ceased to feel the movement, and began to get smaller. In the first week of November her period of natural gestation was completed. Not more than a week after the movement ceased, a discharge of blood commenced from the vagina, varying in color from blackish to pink, sometimes with pieces like flesh, not offensive, but without pain, and in gushes. She now often felt sleepy, tired, and worn, with stiffness in the limbs, on and off, till December. In January, 1860, nothing unusual occurred. Menstruation commenced in February, and has been regular ever since, varying in quantity, and usually of various colors; generally in gushes. The milk remained in the breasts till March, and then disappeared. Since December her health and spirits have been good. She got stout (in addition to abdominal enlargement) from June till October, 1859, but has become much thinner since. On examination, a hard tumour, of the size of a man's head, was detected, mostly on the right side of the abdomen, with a feeling of ridge-like irregularity on its upper and outer part, reminding one of an overlapping parietal bone; it was not painful, neither did she suffer on pressure. The uterus was high up, but felt normal. She was able to get about very readily; appetite good: slept well, and had a good pulse. She expressed herself as being very anxious to have some operation performed, to rid her of the tumour. She was first admitted into the Obstetric ward, under the care of Dr. Ramsbotham, and afterwards under that of Mr. Adams. On consultation the balance of opinion was in favor of an operation, the day being deferred on account of menstruation commencing, which lasted seven days.

May 31st, (five days after the menses ceased.)—The patient being placed very readily under the influence of chloroform, Mr. Adams made an incision about five inches in length, on a level with, and about two inches to the right side of the umbilicus, to about an inch and a half above and to the right side of the pubes, carrying it through the integuments, the rectus muscle, and opening the peritoneal cavity on the upper two thirds of the incision. The tumour was then brought into view, and found adherent to the abdominal wall at the lower third; it was punctured, and about a pint of greenish-yellow limpid fluid, with some cheesy-looking flakes, (as it proved, of vernix caseosa,) and some hairs, emitted. The cyst (the anterior wall of which was found to be thin) was then laid open, and a loop of funis immediately escaped; it was found necessary to cut across part of the rectus, at its inner side, to obtain more room. Mr. Adams then introduced his hand, and drew out a fœtal arm. The child (a female) was then speedily extracted, and was found to be very nearly arrived at maturity, well nourished, but dead. The hair of the scalp was loose and mixed with vernix. The placenta was left in the cyst, and the funis tied. Some omentum having protruded, part of it was cut off, its vessels ligatured, and the remainder returned. After the cyst had been carefully sponged out, the edges of the external wound were brought together by sutures, and strapping, the ends of the ligatures and funis left hanging out of the wound, the abdomen supported with cotton wool and lint, with a woven bandage over all.

She was then taken to bed, and thirty minims of tincture of opium given directly; she became faint, but was speedily restored by brandy. Thirty drops of laudanum were ordered, to be taken every hour till sleep was obtained. She complained of a great deal of pain for three hours after the operation, and then fell asleep for twenty minutes, and awoke refreshed. She was now left under the immediate care of the house-surgeon, who saw her every four hours during the day and night. Towards evening she slept, and vomited as soon as she awoke; complaining of thirst, but suffered less pain. Was ordered ice to suck, and the laudanum every four hours. Pulse good. She passed a good night; slept (at intervals) about six hours.

June 1st.—Took some beef-tea for breakfast, and felt refreshed; had no pain during the day; took iced brandy-and-water, also beef-tea, &c. Towards night she felt a burning pain in the wound, which was relieved by a dose of tincture of opium.

2nd.—Slept very well; no pain nor tenderness: passed urine freely; tongue clean and moist; very thirsty; slight headache.

3rd.—Passed a good night; no pain nor tenderness; felt hungry; took some fish. Bandage and dressings removed; wound looked healthy, with a slight discharge from the lower end of it; bread poultices applied. Towards evening she had pain and spasm at the chest, which were relieved by ether and ammonia.

4th.—Slept well, and expressed herself as very much better; very little pain; wound looking well, and discharge increasing.

5th.—Had less pain; pulse 120; tongue furred; wound healthy, and discharges freely a grumous-looking matter (which Mr. Adams believes to be broken up placenta), the cord having come away in the poultices. Took six ounces of sherry wine, beef-tea, and fish; often feels very hungry.

6th.—Passed a good night as usual; tongue rather dry. The bowels not having been relieved since the operation, Mr. Adams ordered two drachms of castor oil, which operated very freely.

7th.—Took some jelly, and a chop; wine increased to eight ounces, none of the ligatures having come away. The whole length of the wound had now healed by the first intention, with the exception of the lower end, where there is a sinus, of the size of a threepenny-piece, out of which the ligatures hang, and the discharge freely escapes.

8th.—The sutures were now beginning to irritate the bond of union. Mr. Payne removed them. Her pulse sank to 100.

10th.—Continues to improve.

12th.—Mr. Adams removed some of the ligatures, when the discharge of about half an ounce of offensive grumous fluid followed.

17th.—Continues to improve in every respect.

19th.—Mr. Adams removed the remainder of the ligatures, and there again ensued the same offensive discharge. He has ordered her to sit up for a few hours daily.

It is now the twentieth day since the operation. She takes four ounces of wine, and a pint of porter, with a chop, daily, and has not the slightest feeling of uneasiness, except from the annoyance of the discharge, which is, however, slowly decreasing.

July 11th.—She is still going on well, gets up, and walks about the ward daily; but there are no signs of a placenta or membrane coming away, although the offensive discharge continues.

Successful Herniotomy four days after Parturition.—M. Kuhn has published, in the *Gazette Hebdomadaire* the case of a woman who was confined of her sixth child whilst affected with inguinal hernia of only a few months' existence. On the fourth day after parturition, symptoms of strangulation showed themselves, and M. Kuhn, finding the taxis extremely painful, operated at once, and succeeded in reducing. The woman did perfectly well.

KING'S COLLEGE HOSPITAL.

ANEURISM OF THE ABDOMINAL AORTA, PRODUCING EROSION OF THE VERTEBRÆ; FATAL RESULT SLOWLY INDUCED BY GRADUAL HÆMORRHAGE BEHIND THE PERITONEUM.

(Under the care of Dr. Johnston.)

Of the various kinds of tumours which arise in the abdomen, perhaps there are none of more serious import than aneurisms, whether springing direct from the aorta or from some one of its numerous branches. If the sac should burst into the peritoneal cavity, death very quickly ensues. On the other hand, should the aneurism open into the cellular tissue without or externally to the peritoneum, the extravasation of blood goes on slowly, and a fatal result will gradually take place. This form of extra-peritoneal hæmorrhage has been known to give rise to pulsating tumours in the iliac, hypochondriac, and lumbar regions.

The slowness of death in the following case is clearly accounted for by the gradual hæmorrhage which occurred between the peritoneal layers of the tranverse and ascending meso-colon, and which was found to extend to the cellular tissue of the pelvis. The situation of the tumour was below the origin of the superior mesenteric artery, where it had already produced erosion of the bodies of the contiguous vertebræ. As might be expected, its pressure on the vena cava caused the prominence of the abdominal and the varicosity of the superficial crural veins; whilst the albuminuria was wholly attributable to the obstruction of the left renal vein from the same cause. It is extremely probable that the paroxysmal pain denoted a rupture of the aneurismal coats; but from the circumstance of the blood escaping between the layers of the meso-colon, it quickly coagulated, and impeded further flow.

For the notes of the following case we are indebted to Dr. A. Ernest Sansom, house-physician to the hospital:—

Henry P——, a carpenter, aged thirty-eight, was admitted May 18th, 1860. He has had to lift heavy weights constantly; had no serious illness till three months before admission, when a sudden and severe pain occurred one morning as he was going to his work, and caused him to return home. The pain was between the hypochondria; it passed off, but recurred at intervals. He suffered besides from pain in the back. Some time afterwards he felt a throbbing at the pit of the stomach, which he thought to be palpitation of the heart. Coincident with these symptoms were general malaise, sickness after meals, and considerable loss of flesh. Latterly he passed but small quantities of urine, and the pain in the back was increased by micturition.

On admission, he complained of pain in the back, varying in severity, causing him frequently to change his position, but not increased by pressure. He presented the appearance of a strong, healthy man, who had been debilitated by disease. The superficial veins of both legs were seen to be varicose, and those of the abdomen were tortuous and enlarged, especially on the right side. From the ensiform cartilage to within an inch of the umbilicus was felt a distinctly pulsating tumour, which communicated a thrill to the fingers and a rasping bruit to the ear, synchronous with the pulse at the wrist. A small, movable swelling was felt in front of the tumour. The bruit was heard, though somewhat faintly, behind on either side of the spine, chiefly on a level with the ninth dorsal vertebra. There was an exaggerated curve in the lumbar region, and the ribs bulged very much. Breathing pure; heart sounds natural; bruit not heard above the diaphragm; pulse 62. The urine was albuminous; specific gravity 1018, of a rather deep sherry color, containing some small waxy casts. Ordered a compound soap pill and compound magnesia mixture twice a day; soap plaster to the back.

The pains were relieved, and he continued better until the 24th, when, about six P.M., immediately after he had had an evacuation, he had an epileptic fit. After emerging from this, he fell into paroxysms, to all appearance, of violent pain, to such extent that it required three men to hold him. An enema of warm water was first administered, and then, soon after the commencement of the muscular contortions, Dr. Sansom administered chloroform. Just previously, the pulsation of the tumour was found to be diminished, and pressure over its situation seemed to cause pain. Chloroform soon brought about a perfect calm, which continued for half an hour, when it was re-administered; and so, at intervals, throughout the night. At half-past six the following morning the patient was sensibly calmer. At ten A.M. forty minims of solution of acetate of morphia were given by the mouth, which failed, however, to produce the desired effect, so chloroform was continued, but at longer intervals. At two P.M. twenty minims of solution of acetate of morphia were injected beneath the skin of the right upper arm, which soon produced a manifest and continued quieting effect. Soon the paroxysms ceased. On the 26th he had a threatening of their return; but morphia was administered, and he became quiet. The tumour was now felt to pulsate over a wider area. The bowels were relieved by an enema.

On the 31st the patient died. No change was noticed till two hours before death, when the face became pale and gradually completely blanched; the heart's beats were very feebly felt, and after a short time were imperceptible. Occasionally, however, after all pulsation had ceased, a sigh was heaved.

At the post-mortem examination, an aneurismal tumour, of about the size of two fists, was seen to involve the abdominal aorta below the origin of the superior mesenteric artery. The aneurism had burst between the layers of the peritoneum in the transverse and ascending meso-colon, the blood being traced downwards to the cellular tissue of the pelvis. The bodies of the last dorsal and first two lumbar vertebræ had been much eroded, the intervertebral substances standing out nearly a quarter of an inch from the corresponding vertebræ. The small swelling felt in front of the tumour was found to be the pylorus. The aneurism had stretched the vena cava on its surface, and the left renal vein was flattened by it to a riband-like band. The kidneys, especially the left, were enlarged and congested.

Poisoned Perfumes.—The police of Paris have been for some months engaged in the examination of a variety of falsifications, and amongst the rest that of perfumery. Several actresses have been suffering from the effects of poison absorbed from the face, without suspecting that their sufferings came from this source .The quantity of corrosive sublimate, arsenic, verdigris, vitriol, and other poisonous substances daily absorbed in Paris must in effect be immense, and the reform did not commence too soon. The investigation was instigated by an actress of the Varietes Theatre against a perfumer for damages for indisposition attributed to his cosmetics.—*Chemical News.*

UNIVERSITY COLLEGE HOSPITAL.

SEQUEL TO A CASE OF EMBOLON IN THE CEREBRAL ARTERIES, WHICH HAD PRODUCED HEMIPLEGIA, THE RESULT OF RHEUMATIC ENDOCARDITIS.

(Under the care of Dr. Jenner.)

Many physicians are sceptical as to the possibility of diagnosing the existence of embolon during life, and it therefore becomes a matter of importance to give the sequel to any case that we have thought of sufficient interest to record in our "Mirror." Of three instances which appeared in the first volume of this journal for the present year (pp. 52), the second was discharged relieved from University College Hospital. The patient (Charles S——) had been under the care of Dr. Jenner, and not of Dr. Parkes, as was stated, and was readmitted a month after his discharge, under the former gentleman, and he died from uræmic poisoning.

In the notes of the examination made after death (kindly furnished by Mr. Philipson, of Caius College, Cambridge), it will be perceived that the absence of a clot, or of softening, or of any amount of disease in the arteries near the brain, tends very much to exclude the general causes of the symptoms shown by him during the first attack. On the other hand, the condition of the mitral and aortic valves confirms the diagnosis of embolon very strongly, because sufficient time had elapsed before death to allow the detached piece of fibrine to become completely absorbed. The minute vegetations on the borders of these valves were so slightly adherent, that they could be scraped away with but little force. We stated in our former remarks, that although the symptoms were not very clear, yet, on analysis, they pointed to embolon, and we think the sequel proves such to have been the case, for there is nothing else to account for the varying paralysis.

Post-mortem examination.—The arachnoid was slightly thickened, and in places opaque. The brain on section, was less studded than natural with red points; there was no softening of any part of its substance, nor was there any appearance found of altered or recent clot. The arteries at the base were in some places atheromatous, but this alteration had not at any place undergone ossific transformation. No clot was found in any vessel. The pericardium was not adherent. Heart much enlarged, and the wall of left ventricle much thickened. The mitral orifice admitted with difficulty the tips of two fingers; the valve was much thickened, but not ossific. The aortic orifice admitted only the tip of one finger; the edges of the valves were fringed with minute vegetations, some of which were with ease scraped away. Each segment of the valve was attached by its border to its neighbor, thus, as it were, forming a single valve; this valve was throughout thickened and rigid. The valves on the right side were healthy. The muscular structure was not undergoing fatty degeneration. The coronary arteries were slightly atheromatous. The aorta, in its whole extent, was in a state of atheromatous degeneration; in the abdominal portion, the patches had become ossific, and at one or two places bony spiculæ projected into the interior of the vessel. In the external iliacs the same condition was present, as also, to a small extent, in the radials. The kidneys were much enlarged, congested, and granular, easily giving way under pressure.

Clinical Records.

CHRONIC BRONCHITIS AND EMPHYSEMA.

Of the number and variety of affections of the pulmonary organs which constantly present themselves for treatment at our hospitals, perhaps there is none so distressing, and so difficult to relieve effectually, as the above complication. Chronic bronchitis alone requires much attention and care, but when interlobular emphysema is combined with it the disease is quite incurable, and our efforts can be at best but palliative. Although this double form of chest disease is one of the peculiarities of the aged who are subject to constant exposure, it is pretty commonly witnessed also in middle-aged and even younger persons; and in many instances wherein it is seen in apparently strong and vigorous individuals, the emphysema has been the primary affection, originating probably in rupture of the air-cells during forcible bodily efforts. To take a single example out of a number in illustration:—A hitherto strong and robust man (Nathan N——), aged fourty-four years, a gas-stoker, was lately admitted into St. Bartholomew's Hospital, under Dr. Farre's care, with extensive emphysema and chronic bronchitis, which he has had for nineteen years. The suffering from dyspnœa and shortness of breath during that long period, in a strong man, may be very readily imagined. Now, he was suffering from the consequences of this double malady; there was anasarca of the legs, body, and face; the prominent parts of his rounded back were swollen like puddings; the face was dusky, the lips blue, and the breathing very distressing. He was subject to epistaxis; the urine contained no albumen. In the treatment, attention was paid to the bowels; sinapisms were applied to the chest: cupping was resorted to between the shoulder-blades; he was ordered a mixture of decoction of senega, carbonate of ammonia, tincture of squills, and nitrous ether; and was besides put upon brandy. The improvement by treatment was but transitory, for he became moribund in the fourth week, and died shortly afterwards. As we learnt from Mr. Sprague, clinical clerk, there was strong pulsation in the external jugulars, and a systolic murmur of the heart, some days before death.

We might give many more illustrations of this malady, even in St. Bartholomew's Hospital alone, but the present is sufficient for our purpose. Sometimes powerful medicinal treatment will do much in removing the urgency of the symptoms, but it never cures. And this leads us to ask the question, whether some relief might not be afforded by tapping the lung through the parietes of the chest (as we do in cases of thoracic fluid effusions), for the purpose of letting a certain amount of air escape, and so reduce the great pressure constantly exerted by the distended lungs upon the heart and its bloodvessels. At any rate the suggestion is worthy of remembrance in desperate cases.

CARCINOMA OF THE PENILE ORGAN, REQUIRING AMPUTATION.

The rapidity with which epithelioma sometimes spreads, when it has once originated, is really astonishing. It resembles, in this respect, the enlargement of medullary disease, with this difference, that it does not attain to any great bulk. Its growth on the prepuce is generally moderate and slow; but an exception to this was recently witnessed in University College Hospital, in a case under the care of Mr. Erichsen. A man, thirty years of age, the subject of congenital phymosis, noticed a small, hard knob under the prepuce six weeks before his admission. It involved this membrane, and grew rapidly. The prepuce was slit up by a surgeon, who found it studded with these knobs. Since then, epithelioma developed very rapidly, and now it is studded with hard masses, of the size of cherry-stones; but the disease has implicated the anterior part of the penile organ itself. The patient looks sallow, cachectic, and thin, and has the appearance of a man of forty-five instead of thirty. There was no glandular enlargement anywhere, and Mr. Erichsen believed it best to remove the entire disease in the usual way—namely by amputation.

There was no reason to suspect syphilitic disease in this case, because the patient is married, and seems a steady, sober man. It is interesting in relation to the question, whether phymosis was the cause of it; for, in the majority of instances, that peculiarity has preceded the development of the epithelial carcinoma. Mr. Erichsen remarked, on the authority of Mr. Travers, that epithelioma is unknown amongst the Jews. There is good reason to believe the local irritation of phymosis will produce it, as in other parts of the body. In a recent case at this hospital, the patient had phymosis, and the prepuce was slit up by the man himself. When affecting the prepuce, the disease spreads to the glans, and, when involving the latter, it readily extends to the organ itself. Amputation was performed whilst the patient was under the influence of chloroform, and a very large mass of disease was taken away. The patient is going on well.

COLLOID CANCER OF THE UPPER LIP.

Out of a given number of cases of epithelial cancer of the mouth, perhaps not more than two or three per cent. will be found to affect the *upper* lip. An instance, however, came under our observation, on the third ultimo, in a young man who was a patient in the London Hospital, under Mr. Curling's care. The disease appeared to be unmistakable in its physical characters; and although its first appearance had been noticed only five months before, the rapidity of its growth had been somewhat remarkable, and it now implicated more than one-half of the central part. Removal by the usual V incision was out of the question, from the extent of the disease. Mr. Curling therefore excised the whole of it by a semicircular incision above the margins of the growth, the bleeding being controlled by several ligatures; and after the application of light dressing, the patient was sent to the ward.

An examination of the morbid growth was made immediately after by Dr. Andrew Clark, who found it to contain some epithelial matter; but its chief bulk consisted of true colloid cancer, which he considered to account for its rapid development. Thus the case was unusually interesting in a double point of view, for not only was the cancer situated in the upper lip, but it proved to be that rare form known as colloid. The man, we learn is now doing well, and has no enlargement of any neighboring glands.

FRACTURE OF THE FEMUR AND COMPOUND FRACTURE OF LEG AND ANKLE IN THE SAME LIMB.

The question of amputation is one of some moment in cases wherein there may be a double fracture in the same limb. It has not met with any special attention in the more modern works of practical surgery, and its consideration was fully dwelt upon in a case recently admitted into University College Hospital, under Mr. Erichsen's care, of which the following are the particulars:—

A man sustained a severe compound fracture of the leg by a heavy flagstone falling upon it; the injury extended into the ankle-joint. A simple yet comminuted fracture was also present in the same limb at the middle of the thigh. The former necessarily demanded amputation. The question, however, arose as to where it should be performed, whether between the two fractures, or above the fracture in the thigh. Now, as this practical point had never been discussed, it became necessary to judge by the peculiar circumstances as they presented themselves. In some observations made to the pupils, Mr. Erichsen observed that when there is a compound fracture of the lower part of the leg, amputation is usually performed just above it. If the soft structures between the two fractures had been perfectly sound and not bruised, there would have been no reason against the performance of amputation between the two fractures. On examining the limb, however, the intervening soft structures were found to be unsound; there was a bruise in the popliteal space, and an extravasation of blood in the lower third of the thigh, extending downwards to the calf. This arose from laceration of some of the smaller vessels, and not of the main trunks, because there was pulsation in the posterior tibial artery. This condition materially influenced Mr. Erichsen's decision, and he accordingly amputated in the thigh higher up than the seat of fracture. The suspicion as to the state of the thigh was found to be correct after the operation; and the patient died from collapse and exhaustion a short time after, although but little blood was lost. This case was one particularly interesting to the surgeon from the question involved; for here was an injury in the leg which required amputation, and one in the thigh which did not, and yet it had to be performed above that which did not require it, because of the state of the intervening structures.

In April, 1859, there was a case somewhat like the foregoing in the same hospital. A man was admitted with a compound dislocation of the wrist-joint and a comminuted fracture of the lower end of the radius. It was necessary to amputate the arm. There was also some injury to the shoulder-joint, extravasation of blood into the axilla, and simple dislocation of the head of the bone into the axilla; the latter had arrested the circulation through the limb. Mr. Erichsen reduced the dislocation, when the pulsation at once returned into the wrist, showing that the axillary artery was uninjured; and although there was extensive ecchymosis about the axilla with extravasation, still the intervening parts were healthy, and he amputated at the upper part of the forearm. The man completely recovered, and went out well. This casé bears somewhat upon the other; but the question of amputation is solved by ascertaining the condition of the intervening parts.

CONGENITAL ABSENCE OF THE AURICLE, AND MALPOSITION OF THE EXTERNAL MEATUS.

There is at the present time, under Dr. Chowne's care, at the Charing-cross Hospital, an extremely curious and interesting case, which we desire to place on record. It is in the person of Emily D——, aged sixteen years, but extremely small for her age, who was admitted, on the 5th of June, for hæmoptysis and derangement of the general health. She has the appearance of having always been a delicate and deformed child; and although intelligent, the forehead projects backwards, whilst the facial aspect is prominent. Her features strongly resemble those of the Astec children who were exhibited some years ago in this metropolis. Independent of her ailments, she has a malposition of her left ear forwards, to the extent of two inches more than the normal right ear and the left auricle is wanting. Mr. Harvey mentions, in his useful and practical work on "The Ear," that a total absence of the auricle is rarely met with, but that it is sometimes replaced by a mere fold of skin. This proves to be the case in the present instance, for although the great bulk of the auricle is wanting through some congenital deficiency, there is a small fold of skin which crosses and nearly obliterates the external meatus, so that it is wholly invisible to the eye, except on careful examination. The fold of integument (which is the residue of the external ear), although small, is apparently divided into two portions, one of which is the remains of the tragus. The course of the auditory canal, or external meatus, is most probably in an oblique direction, backwards and inwards, and it is reasonable to assume that it is much longer than its healthy fellow on the opposite side. Whatever abnormal condition may be present, however, whether in shape, direction, length, calibre, or curves of the canal, the defective organ still retains its functional power, although, perhaps, not to the same perfection as the other ear. There can be no doubt that the transmission of sonorous undulations is modified by the absence of the auricle and the position of the meatus, whatever that may prove to be. The malformed ear has the appearance of having been cut off with a sabre, and a portion of the integument allowed to remain behind.

The present example affords much food for speculation as to the cause of the deformity during intra-uterine life, more particularly as it is in a part of the economy not usually influenced. The entire temporal bone must have become altered in shape and position, and it suggests the question whether it may not have been the result of injury at a very early period of gestation. The case forms a striking contrast to one under the care of Mr. Birkett, at Guy's Hospital (already recorded in our pages), in which a child had two rudimentary ears growing from its neck, besides the two normal ears in their natural position.

SYPHILITIC SORE-THROAT, TREATED BY A GARGLE OF BICHLORIDE OF MERCURY.

Some of the more severe forms of secondary ulceration of the fauces and tongue are very frequently both painful and obstinate. In acute ulceration of these parts, not only is the ingestion of food a very painful process, but sometimes the pharynx and epiglottis are involved to an extent which renders solid alimentation impossible, and seriously jeopardizes life. Syphilitic ulceration of the mouth is productive of great inconvenience even when present in its milder forms. A severe case lately came under notice in St. Mary's Hospital, in which a cure was quickly effected by the employment of a gargle, which Mr. Coulson, who had the care of the patient, states is constantly employed by him in such cases, and is highly efficient. The formula included six grains of bichloride of mercury, twelve drops of hydrochloric acid, an ounce of syrup, and eight ounces of water: the gargle to be used three times daily, and the mouth rinsed after employing it. The patient is cured, and has now left the hospital.

NECROSED CAVITY IN THE SHAFT OF THE HUMERUS.

When instances of necrosis of the shaft of the humerus present themselves for treatment, the disease is most commonly noticed at the junction of the upper with the middle third of the bone, somewhere about the insertion of the deltoid muscle. This condition is reversed in the femur, for it is mostly at the lower third of that bone that the same condition is observed. Necrosis is more common in these situation of the two bones, than nearer to the joint itself.

On the 15th ultimo, a man, aged twenty-five years, was subjected to operation at University College Hospital, whilst under the influence of chloroform. He had been the subject of necrosis of the shaft of the right humerus for between two and three years. The arm was much weaker than its fellow, and contained two fistulous openings at its upper and anterior part about an inch and a half apart. One of these openings was enlarged by Mr. Erichsen, who came upon a hard dry cavity in the bone, with a few gritty particles. Nothing could be felt actually loose; the wound was therefore stuffed with lint, and from that time suppuration became freely established; the cavity filled up by granulations from the bottom, and ultimately healed. The patient's general health was otherwise good, and he left the hospital quite well.

Foreign Department.

BONE-SETTERS IN FRANCE.

A child of fifteen months, in the department of Mayenne, lately fell from its sister's arms and injured one of the lower extremities. A bone-setter was called in, who handled the limb rather roughly, declared the thigh-bone was broken, and that he had set it. He then tied a handkerchief, moistened with soap and water, round it, and promised to return in a fortnight, receiving 13*s*. for his trouble. The man, however, did not again make his appearance, and a regular practitioner being called in, he found large abscesses, with the fragments of the femur projecting from them when opened. Several months were necessary to obtain union, with considerable shortening. The bone-setter was then sued by the father, and the verdict was as follows:—A fortnight's imprisonment, £8 fine, £40 damages, and the costs of the medical attendance upon the child.

POPLITEAL ANEURISM; DIGITAL COMPRESSION; COAGULATION OBTAINED IN LESS THAN FORTY HOURS.

The *Gazette des Hôpitaux* publishes the following case:—A man, forty-eight years of age, was admitted on the 11th May into the Hôtel Dieu, under the care of M. Laugier, with popliteal aneurism of the size of a turkey's egg. He was subjected to digital compression of the main trunk for seventy-two hours without interruption. The first twelve hours caused in the tumour concentric indurations depending on the formation of clots. After forty-eight hours the tumour was almost universally hard; and from the seventy-second hour, compression, instead of being continuous, was carried on intermittently every quarter of an hour. After eighty hours, only a slight pulsation at the upper part of the tumour was felt without any expansion; it was very hard, and seemed quite solid.

BLOODLESS OPERATION FOR CLEFT PALATE.

It may be recollected that M. Jules Cloquet published in 1855 an essay on a method of applying cauterization to the abnormal cleavage of certain organs, and that cases were therein mentioned in which union of the margins of the cleft had been obtained by repeated cauterizations. At the meeting of the Academy of Sciences of Paris of the 21st May, M. Cloquet brought forward a case treated by Prof. Benoit, of Montpellier. The child was eleven years old; the soft palate was completely cleft, and all the usual symptoms were present. The treatment lasted nineteen months, with two rather long interruptions. The whole cleft has now united, save that of the uvula, and this result was obtained by 33 cauterizations, 14 with the acid nitrate of mercury, and 19 with the solid nitrate of silver. A slight nasal pronunciation still exists, being the result of habit. M. Benoit means to apply the same treatment to the uvula.

THE SULPHATE OF CINCHONINE.

M. **Nonat**, physician to the "Charité" Hospital of Paris, instituted, a short time since, experiments to ascertain the value of this salt in ague. He gave the remedy in severe cases, also in some which had been marked with relapses, and where the spleen had attained a large size. The doses varied from twelve to fifteen grains per diem; the time taken up by the treatment being from eighteen to twenty days, and the amount of the salt consumed in each case ranging from about three to six drachms. The result of these experiments can be shortly stated to be that the sulphate of cinchonine really possesses febrifuge properties; but that being weaker than the disulphate of quinine, it should be given in larger doses than the latter. When the sulphate of cinchonine fails, it should be combined with, or entirely superseded by, the sulphate of quinine. The former salt should never be used in the pernicious intermittents.

PARALYSIS OF A PORTION OF THE FOREARM FROM A WOUND OF THE EXTERNAL MUSCULO-CUTANEOUS NERVE IN VENESECTION.

A **sister** of charity, thirty-eight years old, was bled two years ago in the left arm, the median cephalic being opened. At the time of the operation, she felt severe pain, which lasted more or less for fifteen months. At the end of this period, symptoms of paralysis were observed, this being principally seated in the thumb, the index, middle finger, and the ball of the thumb, the ring and little finger being free. The case has been brought before the Surgical Society of Paris, by M. Vinatier, who had endeavored to allay the pain by subcutaneous injection of atropine, and to control the paralysis by electricity. M. Robert, who has brought in a report upon the case, thinks that the spot where the nerve was punctured should be destroyed by chloride of zinc, and a general tonic treatment tried. Various cases of the same kind were mentioned by members of the Society, in which narcotics had allayed the neuralgia, and removed the paralysis.

DEATH OCCURRING HALF A MINUTE AFTER THE PENETRATION OF AIR INTO THE UTERINE SINUSES.

M. **Depaul** mentioned, at the meeting on the 4th inst. of the Surgical Society of Paris, a case wherein it would appear that the introduction of air into the veins of the uterus caused almost instantaneous death. The patient was a rickety woman, about twenty-two, who twice before had been delivered by cephalotripsy, on account of narrowness of the pelvis. On her third gestation, she had a premature delivery; and when pregnant for the fourth time, M. Depaul resolved to bring on labour at seven months and a half. Douches were administered on two several occasions, without any distinct results; and used for the third time, with the usual instruments. The latter is composed of a cylinder and piston, connected with two elastic tubes, one of which is placed in a pail, to which the instrument is fixed; and the other, much longer, ends in a canula of india-rubber. Nothing particular happened at first except a few pains. Four or five minutes afterwards, a peculiar noise was heard, showing that air was escaping, though the apparatus acted well. The douching was continued, when a gurgling noise was heard in the vagina, and the patient complained of very severe pains She was, however, pacified, and the operation proceeded with. For the third time air escaped through the tube with the water, and another gurgling noise was heard in the vagina. The canula was now withdrawn, and M. Depaul desired the patient to rise and walk about the room. But when she tried to get up, she turned pale and fell; the pulse at the wrist was gone, and the heart had ceased beating. Efforts were made to revive her, but to no purpose—she was quite dead. M. Depaul, hoping then to extract a living child, proceeded at once to the Cæsarean operation. The uterus, instead of being of a reddish brown, was of a pale pink; and when the knife had divided a portion of the thickness of the walls of the womb, a sanguineous froth appeared, instead of the usual gush of dark blood. In proceeding with the incision, bubbles of air escaped, which must have been between the membranes and the inner surface of the uterus, as the former had not as yet been divided. The child on being extracted, was apparently dead; but by insufflation from mouth to mouth, it at last breathed, and lived for fifteen hours.

The autopsy was refused by the family. It is supposed that air must have been injected whilst the douches were going on, and that at the end of each contraction it was aspirated by the open mouths of the uterine sinuses. The apparatus was found quite perfect. It is, however, supposed that each time the water was forced up through the canula, air penetrated into it, though such a mechanism is hardly likely to have existed, as the canula was always kept in a horizontal position.

EFFECTUAL USE OF THE SPONGE TENT IN STERILITY.

M. **Pfeiffer** mentions. in *L'Union Médicale* of the 28th ultimo, that Prof. Stolz of Strasbourg succeeded in removing sterility in the case of a healthy childless couple, who had been married four years. On examination, the cervix was found extremely narrow and very rigid. The use of tents of prepared sponge for a month or six weeks, with an occasional warm bath of an hour's duration, were advised; and the lady became pregnant two months after beginning the treatment. She was eventually delivered of a healthy boy. This procedure seems to M. Pfeiffer preferable to the division of the cervix, as advised by Dr. Simpson, especially where the patients object to the use of the knife.

ON RETENTION OF URINE IN FŒTAL LIFE

M. **Depaul**, the eminent Paris obstetrician, has just concluded, in the *Gazette Hebdomadaire* of the 8th instant, an important paper on the above subject. The research, lucidity, and practical value of the essay are very great; and we are sure that it will be read with benefit by all who are interested in obstretric practice. Amongst the concluding propositions, we remark the following:—"The difficulties which may arise from the distension of the fœtal bladder are such that, in several cases, the head and limbs were torn off without surmounting the obstacle. This distension cannot be detected before parturition, but may be suspected during labour. It can be made out clearly only by the hand introduced into the uterus. When tractions are useless, we should think of puncturing the bladder; and this should be done with the utmost nicety, as the distention of the urinary receptacle does not lessen the viability of the child. After birth, it may become practicable to perform a second operation, by which the obstacle to the escape of the urine may be removed and the child eventually be saved."

CHLORIDE OF ZINC MOULDED INTO STICKS FOR THE PURPOSE OF CAUTERIZATION.

Soften gutta-percha in boiling alcohol, and incorporate it with finely-pulverized chloride of lime, in a warm porcelain mortar, taking equal parts of each. Then roll rapidly on a porphyry slab, to the diameter of a quill, and divide in fragments, each of which shall be pointed at one end. Keep these in a wide-mouthed bottle in powdered lime. These sticks remain perfectly hard, are easily handled, cauterize with great regularity, and act as a sponge through which the chloride will slowly exude, becoming liquid by the action of the air and the skin.

CATHETERISM OF THE LARYNX IN DIPHTHERIA.

A **very** careful investigation of this method of treatment has just been concluded. It had been carried on by a committee appointed by the Medical Society of the Hospitals of Paris, in order to answer the following question put by the Director-General of Hospitals:—Has catheterism of the larynx in diphtheria, as recommended by M. Louiseau, been successfully employed in the hospitals of Paris? The committee was composed of Messrs, Béhier, Monneret, Roger, Sée, and Barthez, the latter of whom drew up a very careful report filled with interesting facts, and very legitimate deductions.

The committee think that M. Loiseau's treatment is not so successful as might, from his assertions, have been expected. The local manifestations have sometimes been favorably modified by it; but it does not check the disease—does not prevent its transformation into croup, and is not more efficacious than the remedies usually employed. The catheterism of the larynx, as practised by M. Loiseau, is not a difficult operation, and has afforded temporary relief to some patients. It has cured four out of twenty-six cases; whilst tracheotomy and the internal treatment were successful in nine cases of these same twenty-six, after M. Loiseau's treatment had failed. The operation is not free from danger, as it caused the instantaneous death of a child upon whom it was performed. This catheterism, in several cases, did harm, and had to be followed by tracheotomy. The committee are, therfore, of opinion that this mode of treatment cannot as yet be substituted for the means hitherto employed, and should not, as M. Loiseau wishes, make us give up the administration of internal medicines; nor should tracheotomy be replaced by this method, as the operation is pre-eminently useful in surgically removing the obstacle which prevents the air from reaching the lungs.

VITALITY OF TOADS.

Towards the year 1850, a workman, in the neighborhood of Blois, (France), struck a mass of silex with his pickaxe, and saw a live toad jump out of the stone. At that period doubts were entertained as to the supposed indefinite vitality of toads, which had been deduced from the above-mentioned fact; and M. Duméril showed that toads, having cartilaginous ribs, could introduce the whole body where the head would enter. These animals are fond of slipping thus into very small apertures and crevices; and hence the error about their vitality when confined within stone. M. Milne Edwards' father, in order to bring the matter under direct experiment, buried some toads into plaster, and where, from the porosity of the plaster, or the existence of crevices, air could penetrate, the creatures lived several weeks, and even months; one, in fact, lived thus for *eighteen months*, this being the only authentic fact of the kind. When, however, the plaster had neither porosity nor crevises, the animals were always found dead and dried up.

At a late meeting of the Academy of Sciences of Paris, the members present had an opportunity of breaking up masses of plaster, in which M. Séguin had imprisoned a viper and a toad in 1852. Both animals were found dead, and evidently dried up for a number of years.

SPONTANEOUS HYDROPHOBIA.

M. **Putegnat** has published, in the *Gazette Hebdomadaire* of the 8th ult., the case of a little boy, nine years and a half old, who was bitten by a dog driven with a stick from a house whither he had followed a bitch. The wounds were healed in about ten days; but forty eight days after the accident the child was seized with all the symptoms of hydrophobia, and died in less than twenty-four hours. The dog presented no symptoms of the malady, but was, when he bit the unfortunate boy, in a fit of anger, increased by the venereal appetite. This case proves that anger and the reproductive molimen may engender the rabic virus. (The case was sent to the Academy of Medicine of Paris, with a paper on the Etiology of Hydrophobia, in 1847, by M. Putégnat, who has not as yet obtained a report.)

Medical Societies.

JULY—AUGUST.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

F. C. Skey, F.R.S., President.

CONTRIBUTIONS TO THE PATHOLOGY OF DISLOCATIONS OF THE SHOULDER-JOINT.

BY WM. HENRY FLOWER, ESQ., F.R.C.S.,

Assistant-surgeon to the Middlesex Hospital.

The object of this paper was to reconcile the discrepancies and correct the errors which are found in the descriptions of the dislocations at the shoulder-joint given by most English and foreign surgical authors. In the endeavors to accomplish this object, three methods of investigation were adopted :—

1. An original examination of the symptoms of recent examples, and of the published records of cases.
5. Experiments upon the dead subject.
3. Examination of all the specimens which illustrate the subject preserved in the anatomical museums of London.

A table was appended of thirty-two recent casees, contributed by house-surgeons of several London and provincial hospitals, according to a form drawn up by the author; the principal aim having been to obtain an accurate record of the symptoms, with measurements, in a number of cases in which the exact position of the head of the humerus, so far as it could be ascertained by external examination, was established. An account of the examination of forty specimens of dislocations at the shoulder-joint, contained in the various anatomical museums in London, formed the second table. In entering upon this part of the investigation, care was taken to exclude cases that may have been the consequence of disease; and, with this view, the differential characters of the changes produced by chronic rheumatic arthritis and by unreduced traumatic dislocation were pointed out.

The general results of the inquiry were given in observations upon some of the special forms of dislocation, of which the following are the most important :—

1. *Subglenoid.*—"Downwards and forwards; the head of the humerus placed in front of the inferior costa of the scapula, below the glenoid fossa." The cases contained in the appended tables appeared conclusively to confirm the observations of Malgaigne, and the modern French school, that this form of dislocation is comparatively rare—an opinion opposed to that of English, German and earlier French authors. Of the thirty-two recent cases in Table 1, five were assigned to this variety; and of the forty specimens in Table 2, but three, even if one were included which was properly an intermediate form between this and the subcoracoid; in all, eight out of seventy-one. The author remarked that it was difficult to understand how the wide-spread error of regarding the subglenoid as the typical form of dislocation at the shoulder-joint should have been so long maintained. A simple process of reasoning upon the anatomical structure of the part would suffice to show that, whenever the humerus is thrown from its socket, it will, almost of necessity, be drawn upwards until it is arrested, either by the coracoid process in front, or the spine or acromion behind. Even in the dead subject, when the humerus is dislocated by fixing the scapula and forcibly elevating the arm, it is almost always drawn up close against the under surface of the coracoid process; *à fortiori*, in the living, must be the action of the deltoid, coraco-brachialis, and biceps cause it to assume this position. In fractures about the neck of the humerus the action of these muscles in raising the lower fragment had long been recognised.

2. *Subcoracoid.*—"Forwards and slightly downwards; on to the neck of the scapula, in front of the glenoid fossa, and immediately under the coracoid process." Under this term were included two varieties, which Malgaigne considers distinct, and designates respectively "subcoracoid" and "intracoracoid." The author observed that, although there are doubtless characters by which well-marked cases of either can be determined, the difference between them is slight, and being rather of degree than of form, there seems no practical advantage in retaining it in our classification. The anatomical characters of this form of dislocation, when recent, were fully described in the paper, as were also the changes which take place in the ends of the bones when left long unreduced, the latter being illustrated by a diagram. The causes of subcoracoid dislocation, as illustrated in the twenty-seven cases in Table 1, were as follows :—Direct falls upon the shoulder in eleven, upon the elbow in four, upon the hand in five; while in seven cases the cause is of exceptional or doubtful nature. Symptoms: The arm was elongated in ten, unaltered in six, and shortened in eleven; the greatest elongation being one inch, the greatest shortening seven eighths of an inch. The vertical circumference of the shoulder was increased in all. The elbow in every case projected more or less from the side, was directed backwards in eight, forwards in nine, and in the middle line, or in a position not recorded, in ten. The arm was rotated somewhat inwards in seventeen, outwards in three, and either unchanged or not recorded in seven. In about half the cases the head of the bone was felt in the axilla, without moving the arm from the side; in the other half, only after the limb was abducted;

but in all the head of the bone was felt through the anterior wall of the axilla, either immediately or not more than half an inch below the coracoid process, the only real diagnostic sign of this injury.

3. *Subclavicular.*—"The head of the os humeri placed below the middle of the clavicle, and on the sternal side of the coracoid process." The frequency of this form of dislocation has been much overrated in consequence of the subcoracoid not having been recognised as a common variety. A dislocation that was not subglenoid was supposed necessarily to be subclavicular. The cases in which the position of the bone exactly corresponds with the above definition of Sir A. Cooper must be very rare indeed, although there are a sufficient number on record to prove the existence of this as a distinct variety. There is no preparation in any of the London museums which shows it.

In conclusion, the author stated that all original and unbiased observation seemed to point to the subcoracoid as the typical position of the head of the bone is traumatic dislocations of the humerus, and a general recognition of this fact would, in his opinion, be an important step in the process of eradicating many of the difficulties and errors in which the pathology both of the injuries and diseases of the shoulder joint had hitherto been involved.

Mr. Brodhurst inquired the author's experience as to the length of time after the occurrence of dislocation, that reduction could be effected, and the motion of the joint restored. A case was recorded that had occurred in the practice of Pritchard, in which, under the influence of chloroform, dislocation had been reduced at the end of fourteen weeks. In a case which had come under his own (Mr. Brodhurts's) care he reduced a dislocation at the end of six months. The motion of the joint was as yet imperfect, but was being gradually restored, notwithstanding that the deltoid was atrophied, and the great pectoral muscle considerably shortened. He had been informed by Dr. Keppell, that that gentleman had succeeded in reducing two cases of dislocation of the shoulder—one of seven months', the other of fourteen months' duration. In both cases the motion was satisfactorily restored It would be interesting to determine the condition of the shoulder-joint after dislocation had existed for so long a period. In a case which had occurred in his practice, dislocation was reduced with great facility. The adhesions were broken through in two or three minutes. The proceeding was followed by no bad results, and in two days the man was able to leave the hospital.

Mr. Flower had not been able to determine the condition of the joint after dislocation had existed for a long period. Specimens were exhibited in several of the London hospitals, but to scarcely any of them was there any history attached.

Dr. Wall remarked, that when articular surfaces were removed from their cavities, it was generally understood that the latter became more or less obliterated. It was remarkable that no difficulty should be experienced in getting the head of the humerus back into a cavity which for six months had been more or less preoccupied. This was more particularly the case when the adhesions which dislocated bones acquired were taken into consideration. He should be glad of some explanation on this point.

Mr. Skey observed that when the head of a bone had been out of its place for a period of from four to five or six months, there was no doubt that it formed adhesions of a very decided character. In long-standing cases, and under ordinary circumstances, it was all but impossible to reduce a dislocation without the adoption of some previous steps to break down the adhesions. This was a somewhat elaborate process, but could always be done without difficulty. The specimens in the various museums were taken from the dissecting-room, and were of long standing, affording no criterion of the condition of the parts in cases of comparatively recent date. In cases in which the glenoid cavity had been deprived of the head of the bone for a few months only, he had yet to learn that any such pathological change had taken place on the surface which was incompatible with the reduction of dislocation.

Mr. Brodhurst said that in the case to which he had referred, no difficulty was experienced in breaking through the adhesions, nor in retaining the bone *in situ* after the reduction had been effected.

Mr. Chalk, in corroborating the statement of Mr. Brodhurst, expressed his opinien that it was most probable the patient would recover the complete use of the joint.

In reply to a question from Dr. Wall, Mr. Brodhurst said that the "click" which accompanied reductioh was distinctly heard.

Mr. Skey, in a case in which reduction had been effected after an interval of five months, had distinctly heard the "click."

ON CONGESTION OF THE HEART AND ITS LOCAL CONSEQUENCES.

BY WILLIAM JENNER, M.D.,

Physician to University College Hospital, etc.

The author stated that the objects of this paper were to call attention to the occurrence of congestion of the muscular tissue of the heart, to the most common and direct consequences of that congestion—viz., induration and toughening of the walls of the heart—and to the influence which those changes of texture exercise on the development of dilatation of that organ, by rendering permanent every increase in capacity from over-distension, which would be temporary in a heart whose walls were normal. Impediment to the passage of the blood, Dr. Jenner said, through the right side of the heart, whatever its cause, must be attended by over-distension of the veins of the heart; and as very gradually developed, long-continued, intermitting congestion of any organ, the functions of which are over-actively performed, notwithstanding its congestion, is followed by induration, toughening, and hypertrophy, so the walls of the heart will, under the conditions specified, become harder, tougher, and thicker than natural; and as these changes in the texture of the walls of any hollow viscus are the conditions which determine the occurrence of *permanent* dilatation of that viscus, when pressure on the inner surface of its walls is sufficient to over-distend them, so when these changes affect the walls of the heart, and there is great impediment of the escape of blood from its cavities, they lead to its permanent dilatation. After describing the general and microscopical characters of hearts, the walls of which are indurated, toughened, and thickened from long-continued congestion, the author detailed several cases, for the purpose of illustrating the general positions maintained in the paper.

Dr. C. J. B. Williams, while admitting the value of the paper, observed that the doctrines contained in it were those he had been in the habit of teaching in his lectures, and expressed surprise that the author of the paper had not spoken of the modifications in the effect of congestion which result from the different states of the blood that exist in special conditions —for example, in cyanosis.

Dr. Jenner had consulted the literature on the subject of his paper, and had failed to discover that his views had hitherto been adopted by the profession.

A CASE OF ACUTE CARIES OF THE WALLS OF THE TYMPANIC CAVITY, PRODUCING ULCERATION OF THE INTERNAL CAROTID ARTERY.

BY JOSEPH TOYNBEE, F.R.C.S. ENG.,

Aural Surgeon to St. Mary's Hospital, and Lecturer on Aural Surgery at St. Mary's Hospital Medical School.

Cases of ulceration of the internal carotid artery arising from caries of the walls of the tympanum, being so extremely rare that the author had found but one on record, he had been induced to lay the following case before the Royal Medical and Chirurgical Society:—

W. C——, aged forty-six, a jobbing builder, was admitted, under Mr. Toynbee's care, at St. Mary's Hospital as an out-patient on the 16th of August, 1859. He was sallow and thin, and evidently out of health. Two years previously he had received a violent blow on the head above the left ear. Three months before his admission at the hospital, during a violent fit of coughing, he was seized with intense pain in the left ear, which became constant; this pain was followed by discharge, which was also constant. In spite of all treatment, the pain and discharge continued, and on the 16th of January blood of a bright-red color came from the ear, and continued to do so at intervals until the 27th of January, when the patient died.

Upon a post-mortem inspection, the upper and anterior osseous walls of the tympanum were found to be carious, and there was a large aperture communicating with the cavity of the canalis caroticus. A small ulcerated opening was found in the internal carotid artery, through which the hæmorrhage had taken place.

ON BRIGHT'S DISEASE, CONSIDERED IN RELATION TO ITS ORIGIN IN THE TUBES THEMSELVES, OR IN THE INTERTUBULAR STRUCTURES.

BY W. H. DICKINSON, M.B. CANTAB.,

Medical Registrar and Demonstrator of Anatomy at St. George's Hospital.

The object of this paper was to show that all the forms of diseased kidney, large and small, rough and smooth, were capable of arrangement into two great classes; that in one there was disease proper to the secreting surface of the tubes, while in the other there was disease essentially of the structures between them; and that the great characteristic difference between these two conditions was the presence or absence of superficial granulation.

The author first sketched the pathology of tubular disease, which gave rise to the large smooth kidney, regarding as unimportant those distinctions which depended on the nature of the material which filled the tubes. He commenced by explaining the method made use of in the investigation. Portions of the gland were boiled in water slightly acidulated with acetic acid, and then dried until hard enough to allow sections to be cut from them. These, moistened with water, and magnified 80 or 100 diameters, showed the structure of the kidney in a very beautiful manner, and had the advantage of exhibiting the various elements of the gland in their natural relation to each other, which cannot be satisfactorily attained by any other method.

The various successive changes which produced the large, smooth kidney were adverted to; the increase of size; the anæmia, more in appearance than in reality; the smooth surface, and loose capsule. It was then maintained that the essence of the disease was merely excessive secretion, as the only portions of the gland affected were the tubes. A drawing was exhibited showing that the gland was perfect in all its parts, and the tubes in contact with each other. The accumulation within the ducts of their own secretion was shown to be the sole cause of the enlargement of the organ, and the microscopic characters of this epithelial product were examined at some length. The frequent development of oil in the cells was regarded as the consequence of the disease, not as the cause; and the occasional secretion of pus, in the later stages, was looked upon as another indication of the inflammatory origin of the complaint.

The author then showed that there was reason to think that the degree to which the epithelium had become disintegrated might be taken as the measure of the chronic nature of the disorder. The longer the disease lasted, the more the cells became broken down.

The condition of the straight tubes was then adverted to, the ready escape of their contents tending to produce a different state of things from that observed in the cortex. They seldom became totally obstructed, but their walls often became bare of epithelium. From the fact that, in cases where the tubes in the cortex and in the cones had been found after death in a different state, the casts shed during life had always resembled the contents of the straight tubes, it was inferred that these bodies were there produced.

The renal catarrh having thus been traced, from its commencement in excess of epithelial growth to its climax in total obstruction of the tubes, the next stage was discussed. The overstretched tubes were described as bursting, one by one, and their contents, no longer secluded by a surrounding membrane, thus brought within reach of the absorbents. Examining in section a number of large smooth kidneys, it was found that about half of them had thus commenced to pass from the state of enlargement to that of disease. (A drawing of such a section was exhibited.) Although in these organs the bulk is still excessive, yet the indications of shrinking are clear enough. Places are found, especially near the surface, where the Malpighian bodies are huddled close together, sometimes almost touching each other. Their intervals are occupied by *débris* of collapsed and ruined structure. Shrivelled remnants of tube-membrane are generally clearly seen. But, as yet this condition is only partial; tubes still distended are often seen winding amongst the wasted remains of their companions. Thus the tubes one after another collapse, until a great portion of the gland is reduced a little more than the bulk of its Malpighian bodies. A corresponding change of course takes place in the appearance of the gland: it has shrunk even below the natural size. The surface remains pale, greyish, and mottled, and is still smooth. On section, the cortical material is found to have almost disappeared. (A drawing was shown representing a section of a kidney in this rare condition.) Examination with high powers and the fresh organ corroborated the conclusions above-stated.

The author now passed to the consideration of the intertubular disease—that producing the granular kidney,—describing first the chronic, then the more acute forms of the disorder. In the earliest period at which the disease could be recognised, the capsule was described as being somewhat thickened and adherent, and manifesting a tendency to split into two layers, the tendency to granulation being indicated by a little general roughness, or by a few curved depressions. On section, all the central parts would be found healthy, save that closely attached to the inner capsular film; certain narrow projections could be seen insinuating themselves between the tubes. These processes of fibrous-looking material each started at the surface, formed a superficial depression or cicatrix, and, passing inwards, involved in their interior the contracted remains of the tubes they imbedded in their passage. It appeared as if an effusion, small in amount, commenced at the surface, and worked its way inwards amongst the ducts, numbers of them thus becoming completely surrounded. After a time, contraction followed in the wake of the exudation, and the tubes imbedded were reduced to mere microscopic threads. At the same time appeared another result of the contractile tendency: the points at which the processes originated became depressed; and when these were numerous, and tolerably regularly distributed, the result was superficial granulation. It was maintained that no amount of mere distension of the tubes could suffice to produce a granular surface; that before this could result the surface must be tied down at numerous points, between which only is expansion possible.

The changes, as discovered by the naked eye and by the microscope, in the fully-developed chronic granular kidney were then detailed, and a representation of one in section exhibited. Narrow, pointed processes, of a fibrous aspect, were described as passing a little way into the kidney from the intergranular depressions, and in a corresponding position the contracted remains of tubes, these shrivelled tubes being all that in some cases indicated the path of the exudation. It was inferred that this destruction of tubes was not owing to any disease within themselves, because it extended quite independently of their direction, following a straight course inwards irrespective of the bends and tortuosities of the ducts. If the section happened to come across a vessel, it was seen to be surrounded by an increased quantity of fibrous tissue, as, thus contracted, the capillaries became obstructed, and the transmitting power of the gland proportionally reduced. The condition of the tubes in this form of disease was contrasted with what is observed in the smooth kidney. In the latter there was an excessive secretion of epithelium, which was universal, affecting alike all the secreting structure. With the granular kidney there was observed an irregular shedding of the epithelium, which was only partial, some of the ducts being affected, while their neighbors escaped, in consequence probably of an intertubular effusion taking place at intervals through the organ, causing, where it occurred, premature displacement of the epithelial cells. Cysts were spoken of as occurring in both varieties of disease, but from different causes: in the smooth kidney, from the development of the epithelial germs after the rupture of the tubes; in the granular, from the transformation of the tubes, owing to the contractile tendency outside them.

The author then described a kidney affected with a more acute and disturbing form of the disease, alluding to the paler tint of the surface, contrasted with the dirty-red of the chronic form, and to the larger size of the granulation. A drawing was displayed, showing a section of a kidney in such a condition. The minute morbid anatomy of the organ was detailed, and the tendency of the convoluted tubes to become filled with glassy fibrinous matter, instead of, as in the smooth kidney, their own secretion, particularly dwelt upon. This was attributed to an effusion arising from the capillaries or other structures between the tubes, soaking through the tube walls, and removing the epithelium, until at last it ceased to be reproduced.

The condition of the epithelium was discussed, and the occasional presence of oil in the cells spoken of, the only morbid change to which they were liable, the disintegration they underwent being an alteration subsequent to their detachment. Carefully comparing the epithelium found in the tubes of granular kidneys with that from the same position in healthy glands, the author professed himself unable to detect any difference.

The results of some experiments were then detailed, the object of which was to determine how far the permeability of the bloodvessels of the organ was modified in its various conditions of health and disease. Several kidneys were taken of each kind, and water at a certain temperature, and with fixed pressure, allowed to enter the artery and escape by the vein, and the quantity thus passing in a given time was measured. From these observations it appeared that the large, smooth, mottled kidney allowed the normal amount of blood to pass through it, while through the granular kidney less than one quarter of the proper quantity was transmitted. It was further shown that the obstruction was due to some change in the small vessels of the organ; for careful measurements of the main trunks showed only a slight amount of narrowing, quite insufficient to account for the results. In conclusion, the following chain of evidence in favor of the intertubular origin of the disease producing the granular kidney was recapitulated:—

1. Near the surface an effusion is often seen, obviously between the tubes. This accounts for the superficial granulation, and bears out the analogy between granular degeneration of the kidney and cirrhosis of the liver.

2. Tubes are caused to shrivel by some influence which travels independently of their direction.

3. Tubes are sometimes divided into cysts. This can only be accomplished by a contractile force external to themselves. In the smooth kidney this never occurs.

4. It usually happens that some of the secreting tubes remain natural, as if they had been out of the way of the effusion; while, in the smooth kidney, all are commonly involved.

5. A decided difference exists, in well-marked cases of each sort, in the contents of the tubes. In one they are filled by their own morbid secretion; in the other, they are occupied by a material foreign to it, and probably derived from without.

6. In the granular kidney, as in the cirrhosed liver, some alteration takés place in the minute anatomy of the organ which impedes the passsage of blood through it. This does not take place in the smooth kidney.

ON GLAUCOMA AND ITS SURGICAL TREATMENT.

BY J. W. HULKE, F.R.C.S.

Assistant-surgeon to King's College Hospital, and to the Royal London Ophthalmic Hospital.

The author refers to a paper "On the Morbid Anatomy and Pathology of Glaucoma," communicated by him to the Society in December, 1857. Since then, the treatment of glaucoma by "iridectomy" has been extensively practised in the Royal London Ophthalmic Hospital and in private, and the results have been so very successful that the author is desirous of bringing the operation under the notice of the Society. In order to prevent any misunderstanding respecting the nature of the cases in which he advocates the performance of iridectomy, Mr. Hulke gives an outline of the symptoms, the ophthalmoscopic signs, and the morbid anatomy of glaucoma. There are two forms of this disease—an acute, and a chronic; but many cases have an intermediate character. In 75 per cent. or more of all cases, the active stage is preceded by a premonitory period—"prodroma." In acute cases the transition is abrupt; in chronic cases it takes place by insensible gradations.

Premonitory symptoms.—Rapidly increasing presbyopia; the appearance of a colored halo round the flame of a candle; the spontaneous appearance of flashes and other spectra. Inter-current obscuration of vision, attended with vague orbital and frontal pains, slight hardness of the eyeball, and contraction of the field of vision. The pupil is large and sluggish; the size of the anterior chamber is much diminished. The duration and intensity of the symptoms are very variable, but they are rarely absent.

Acute Glaucoma.—The active stage sets in as a sudden and violent outbreak, often at night. Violent racking pain in the eyeball, often attended with sickness, and followed by rapid extinction of sight. The pupil is widely dilated and motionless; and the lens has sometimes the peculiar greenish tint which was formerly considered so characteristic. The ciliary vessels are swollen; the conjunctiva is red and often chemosed; the globe is very hard; the cornea is dull, and its sensibility is lowered. Remissions are followed by fresh paroxysms, and complete, irremediable blindness always ensues.

Chronic Glaucoma.—The premonitory period slowly glides into the active. The obscurations, which were at first evanescent and separated by long intervals, become more frequent, and last longer. The contraction of the visual field progresses. The tension of the globe increases. The iris becomes dull; the aqueous humour turbid; the cornea dimmed and flattened. Mr. Hulke lays stress on the flattening of the cornea, which is easily demonstrated, because it has been recently stated that the cornea becomes conical in glaucoma.

Ophthalmoscopic signs.—Excavation of the optic nerve entrance, and pulsation of the retinal vessels. To these capillary apoplexy of the retina is often added; and sometimes there are small blood-clots in the vitreous humor, which is unnaturally firm. It is only late in the disease, when all the component structures are undergoing atrophy, that the vitreous humour becomes fluid.

The nature and causes of the glaucomatous process.—All the leading features of the glaucoma are due to excessive tension of the eyeball from a superabundance of fluid within it, which distends the vitreous humor. This fluid—serum—is derived mainly from the choroid. Many circumstances show that the retina is only passively concerned. Glaucoma might be considered a serous choroiditis. Mr. Hancock has advanced the theory that spasm of the ciliary muscle forms an essential part of glaucoma. The author has, however, found complete atrophy of this muscle in some dissections of glaucomatous eyes; hence the inference that this muscle is not concerned in maintaining the glaucomatous condition. The author has been unable to trace any connexion between glaucoma and gout or rheumatism. Some other diseases and injuries of the eyeball occasionally assume a glaucomatous type. This is especially the case with wounds of the ciliary region and sclerotico-choroidal staphyloma.

Treatment.—Generally the age and broken health of the subjects of glaucoma forbid antiphlogistics; venesection is inadmissible; leeches and counter-irritants are useful as adjuncts, but cannot alone cope with the disease. The excessive tension of the globe is suggestive of the evacuation of some of the superabundant fluid by tapping. The old surgeons, Antonius Nuck, Jobus à Meekren, and others, were familiar with this operation, but they practised it chiefly in hypopion, onyx, and hydrophthalmos. Wardrop (" Med. Chir. Trans.," 1613,) tried it extensively. With a view to lessen fulness and congestion, he tapped the anterior chamber in superficial and deep-seated inflammation of the eye. The operation was at first warmly taken up by other surgeons, but soon fell into disuse. In our own day it has been strongly advocated by Desmarres, but it has found little favor with English surgeons, though most have occasionally performed it. In glaucoma the relief that paracentesis corneæ affords is too transient to render it of much value. Paracentesis scleroticæ has been practised by Desmarres and Hancock in glaucoma, though with different objects. Mr. Hulke reverts to this, after fully describing the operation of iridectomy as proposed by Dr. A. von Graefe.

Iridectomy consists in excising a segment of the iris, in its whole breadth, from the pupillary margin outwards to its insertion. This is effected through an opening of corresponding size at the extreme edge of the anterior chamber. Iridectomay may be practised at any part of the iris. Graefe usually makes it outwards; but adds that, when desirable for the sake of appearance it may be made upwards. This latter position has been adopted by Mr. Bowman, and is that which Mr. Hulke has generally chosen. By removing the iris in this manner, the pupil is at once enlarged up to the corneal incision, which forms, as it were, the base of a coloboma, iridis, and the edge of the lens, with the suspensory ligament, stretching in front of the vitreous humor and the ciliary processes, are exposed to view. The little blood which oozes into the anterior chamber from the cut edges or surface of the iris, should be at once pressed out or removed with a scoop. The after treatment is very simple. A light compress may be applied for a short time as a precaution against hæmorrhage. This may be replaced after an hour or two by a piece of wet rag. The room should be shaded. Usually nothing else is necessary. At first the aqueous humour trickles away; but the corneal wound soon heals, and the anterior chamber fills again. The hardness of the eyeball is at once lessened, and a natural tension is gradually attained; the pain abates, and soon altogether disappears. As regards vision, the ultimate results are intimately dependent on the period at which the iridectomy is performed, being more perfect where it has been early undertaken than where it has been postponed. In the premonitory period, where the symptoms are well marked, the propriety of operating cannot be doubted. In acute glaucoma, where the operation is done during the first inflammatory attack, or soon afterwards, vision is very completely restored. In chronic glaucoma, the results are less uniform and less decided. This is in consequence of the insidious nature of the disease—structural changes in the retina creeping on *pari passu* with the gradually increasing tension.

Alleged objections to iridectomy—1. Its *reported* uniform failure in the hands of some surgeons. This is in great probability to be generally attributed to its having been practised in cases which were not true instances of this disease. Many failures have proceeded from its having been done at far too late a period.

2. The great difficulty of the operation. This has been much magnified. It does not require more skill than most surgeons possess, and when chloroform is used it becomes really a simple matter; but even were it difficult, which it is not, in the absence of other known means of cure, we should be no more justified in rejecting it on this account, than we should be in refusing a patient the benefit of herniotomy were the taxis and other measures had failed.

3. The disfigurement produced by the coloboma iridis is so slight that it cannot constitute a real abjection.

4. Its supposed injurious action on accommodation. Further experience has corrected some miss-impression which at first prevailed respecting its influence on the adjustment of the eye. The previously existing presbyopia is not increased by removal of a portion of the iris; indeed, the refracting power of the globe sometimes actually increases after iridectomy—probably, as Graefe has shown, in consequence of the flattened cornea resuming its natural curvature.

To avoid these alleged disadvantages, paracentesis scleroticæ has been advocated by Middlemore, Desmarres, and Hancock, as a substitute for iridectomy. Middlemore proposed to evacuate the *turbid, diffluent, vitreous humour* with a grooved needle, and to replace it with a syringeful of clear water. But, except in very old cases, the vitreous humour is much too firm to flow out along a grooved needle; and probably few English surgeons would adopt Desmarres' suggestion, of introducing a probe and breaking it up. Mr. Hancock, considering a spasm of the ciliary muscle to be an essential part of glaucoma, divides this muscle by striking a knife through the ciliary region backwards and inwards towards the axis of the globe. But Dr. Hulke has demonstrated, by microscopical examination, advanced atrophy of this muscle in many glaucomatous eyeballs; whence it follows that the ciliary muscle is not actively concerned in maintaining the glaucomatous process. In all probability, the success of Mr. Hancock's operation is solely due to the draining away of some of the superabundant fluid. According to this view, it is simply a peculiar mode of paracentesis, and cannot rank as a substitute for iridectomy until it has been thoroughly established that it *permanently* relieves excessive intra-ocular tension, which, in common with most surgeons, Mr. Hulke has found that tapping the vitreous humour fails to do.

OBSTETRICAL SOCIETY OF LONDON.

DR. RIGBY, PRESIDENT.

Dr. Harley exhibited (for Dr. Newman, of Fulbeck) a Fœtus of about four months, which had been retained in utero for some weeks after its death.

Dr. Drake gave a description of a case of Extra-Uterine Pregnancy. An opening formed between the fœtal cyst and the vagina, through which a number of bones were extracted. The woman ultimately recovered.

ON SOME OF THE EXIGENCIES CONNECTED WITH PRETERNATURAL LABOUR.

BY JOSEPH THOS. MITCHELL, E.R.C.S.E., ETC.

The author commenced his paper by referring to the ill consequences which often follow the too strict adherence to the axiom in midwifery that "meddlesome midwifery is bad midwifery." He set this forth by alluding to the history of cases that had come under his notice, in which the lives of some women had been placed in jeopardy, and the future comfort of others had been permanently destroyed, as well as of other cases, in which children had been born dead, whose lives would most probably have been saved had early manual or instrumental aid been applied. He then alluded to his strong objection to the use of the crotchet, in cases of craniotomy, and his custom in such cases to rely alone on the craniotomy forceps for delivering, relating a case that occurred in an extremely narrow pelvis, in which the practitioner absolutely refused to use the embryotomy forceps, and would depend alone on the former instrument, by which he extensively lacerated the vagina, in consequence of its often slipping off from the head during the operation, which case terminated in the death of the woman, undelivered; the uterus having been ruptured, and the child having passed into the abdomen, when in all probability, had the embryotomy forceps been used, delivery would have been safely effected, as it had been on a former occasion. He next referred to the culpability which rests on every practitioner who undertakes to attend on any woman in her second or subsequent labour, who had previously been delivered by embryotomy or by the forceps, when the child had been born dead, without inducing premature labour between the seventh and eighth, or at the eighth month of gestation, as the nature of such former labours might seem to indicate. He related a remarkable case in which a practitioner had neglected so to act, and the complicated difficulties which followed, requiring the dismemberment of a very large child at the full period of gestation. The abdomen and chest were eviscerated, and then the lower half of the body was removed at the fourth dorsal vertebra, by which alone room could be obtained to reach the arms and head. The patient did well. She afterwards came under the author's care, and was delivered safely at premature periods on four different occasions, twice with great difficulty at seven months and a half gestation, and subsequently twice at six months and a half, on each occasion by inducing labour by puncturing the membranes, for which purpose he adopted a peculiar instrument, which he exhibited to the Society, and which instrument he had found useful also in rupturing the membranes in cases of placenta prævia attended with extreme circumstances. The instrument was made by Messrs. Millikin and Lawley of the Strand. In the course of the relation of this case, the author stated that, on the occasion of the third labour, at seven months and a half gestation, when the head presented, delivery was effected by the forceps, and a child was born that lived fourteen hours; and on that of the fourth accouchement, at the same period, when the arm presented, the woman could not be delivered except by dismemberment of the child. From these circumstances he deduced the conclusion that it was not wise to adopt the modern recommendation of delivery by turning in cases of small pelvic brims, whenever delivery could be effected by the forceps, as by that means a far greater chance would exist of delivering a living child than when turning is adopted. By the latter mode, the protracted pressure unavoidably made on the funis as the head is passing through the brim, is almost certain to occasion the death of the child; and in cases also where delivery can be effected by craniotomy, it is accomplished with less distress to the mother than by turning. The author also referred to the fatal consequences to children which often follow doubtful or incorrect diagnosis of presentations in early labour, especially in cases where delivery can only be effected by turning; which he showed in the history of a case in which there was the presentation of the abdomen with the child doubled up, the head resting on the sacrum, and the hips on the pubis. In this position the practitioner allowed the case to remain for nearly three hours, not knowing the character of the presentation, and what it necessitated, the woman all this time suffering under violent expulsive labour, by which the child was killed; whereas, had turning been adopted at the commencement of this period, which would then have been a perfectly easy operation, the os uteri being then fully open, the child would doubtless have been born alive.

Dr. Priestley thought that the Society was much indebted to Mr. Mitchell for his practical paper, and he believed it would be very advantageous if other gentlemen would record their mistakes and occasional failures, instead of only relating their successful cases. He quite agreed with Mr. Mitchell in his denunciations against the crotchet, which he considered a most unsatisfactory instrument; and hence he very generally resorted to the use of the craniotomy forceps in the place of it. He considered that Mr. Mitchell had increased the difficulty of delivery in one of the related cases, by amputating the lower half of the child's body, by which means he had deprived himself of the power of properly employing traction.

Dr. Rigby stated that the crotchet certainly did not fulfil the wishes of those who were obliged to employ it. This instrument was always apt to slip, and when it did so, there was great danger of its injuring the soft parts of the maternal passages, or the fingers of the practitioner.

Dr. Tanner mentioned that in two or three cases of more than usual difficulty, he had found Dr. Oldham's small hook of great service in aiding delivery. He confirmed the remarks of the previous speakers with regard to the crotchet.

Dr. Waller said that his old teacher always alluded to the crotchet as an atrocious instrument. For his own part he never used it, except by passing it up outside the head; and then sometimes by fixing it in the orbit, he got a good and serviceable hold. He mentioned a case of great difficulty where he had used the craniotomy forceps successfully, when the crotchet was quite useless.

Dr. Barnes did not rise to defend the crotchet, but still he had had more success with it than many other Fellows of the Society seemed to have had. In Dublin the most eminent obstetricians use the crotchet, and with success. He had employed Dr. Oldham's hook, and found it answer very well. In Mr. Mitchell's paper there were so many topics treated of, that there was no difficulty in speaking upon some one point. He thought that the author was wrong in assuming that turning ought to be discarded in cases of contracted pelvis. The question was: were there cases lying between the possibility of applying the forceps, and the necessity of resorting to craniotomy, in which turning might be performed without additional danger to the mother, and with a prospect of safety to the child? That there were such cases was as clear to him as any proposition in midwifery.

APPENDIX TO PAPER ON CONCEALED ACCIDENTAL HÆMORRHAGE.

BY J. BRAXTON HICKS, M.D., ETC.

This was an addition of eleven cases to the ten already described; the majority not having been published, the author was indebted to the gentlemen whose names were mentioned with each report. These cases, it was observed, might be concealed totally till death or the termination of labour, or temporarily for a longer or shorter time. During the non-appearance of hæmorrhage externally, the diagnosis of the case was as difficult as when wholly concealed. After reporting the cases, an analysis was given, showing that fifteen died and six recovered; and that it was much more fatal at full term than at any other period. The diagnostic symptoms were then pointed out,—namely, 1st, severe fainting or collapse; 2nd, the enlargement and doughy feel of the fundus uteri, the outline of the fœtus being lost, and very frequently a sensation as if about to burst; and, 3rd, in nearly every case the absence of true labour pains. These, taken together, were held sufficient to point out the true nature of the accident. When no pain was present, the state was very liable to be mistaken for ordinary syncope; and the author urged that in all cases of severe and protracted faintness during the latter months of pregnancy or labour, the state of the uterus should be carefully watched. It was also advised that the same treatment as is now adopted in ordinary accidental hæmorrhage should be employed as early as possible in this form, though the usual good results could scarcely be expected, because, although the contents of the uterus were thereby diminished, yet as the effused blood, being bound down by the placenta, prevented the uterus from contracting at that part, the bleeding sinuses were kept patent. This was borne out by the analysis of the twenty-one cases.

Dr. Tanner stated that he had recorded a case of concealed accidental hæmorrhage, which had escaped the notice of the author of the paper. The communication was to be found in the *Medical Times* of Oct. 18th, 1851. In this instance the separation of the placenta was due to a violent fall; and the patient would doubtless have died had not the labour been hurried, and the delivery effected by the forceps. As it was, large quantities of stimulants were required, and the infant was still-born.

HARVEIAN SOCIETY.

MR HENRY THOMPSON, President.

Dr. Toulmin, of St. Leonards, read a paper,

ON THE IMPORTANCE OF THE FUNCTIONS OF THE SKIN IN THE PATHOLOGY AND TREATMENT OF TUBERCULAR CONSUMPTION.

He commenced by offering as the proximate cause of tubercle in all cases, "the breathing of impure air, and air is not so small a quantity as to render it impure, especially during the night." He observed that wherever this was the continuous state of existence, the result must be a deficiency in the red globules of the blood, and as the consequence of this, the deposition of plastic fibrin in an incomplete state of oxygenation, and, therefore, of organization, and thus incapable of being ultimately got rid of by change of matter. It consequently remains as an extraneous adventitious substance in the system, offering to the observer all the characteristics of tubercle. To explain the discrepancy which appears in the rich (who have no want of oxygen in the air they breathe) being equally subject to phthisis as the poor, he drew the attention of the Society to the importance of the respiratory functions of the skin, as proved by the almost instant death that occurs on closing the cutaneous pores by artifical means—as in varnishing and gilding the skins of rabbits and other animals; and observed, that in consequence of the coldness of our climate, and other causes, the higher classes of society were certainly not in the habit of making the washing the whole surface of the body a part of their daily toilet, and, consequently, that the exuviæ momentarily forming on the surface of the skin, the joint production of the sordes from within, combined with the *débris* of the cuticle, soon render the skin more or less impervious, although the individual might be in the habit of changing his linen daily. As an illustration of this state of skin, the author refers to acne, so frequently seen on the face as being in reality the general state of the skin of a large proportion of society, especially in the earlier periods of life, when phthisis generally shows itself; and that the free entrance of air, as well as the exit of carbonic acid through the skin, being thus impeded, the same imperfect oxygenation of the blood ensues as is produced in the poorer classes by breathing mephitic air. He remarked, that for the removal of this state of skin the only means were to be found in instituting a full and free diaphoresis by the aid of artificial heat, the result of which, in first softening, and then expelling, large quantities of inspissated sebaceous matter, after the surface of the body had been washed clean with soap and water, was surprising. The author drew the attention of the Society to the fact, that the use of the hot-air bath, as a therapeutic agent, was no innovation on the established practice of the profession, as it was the mode of bathing practised by Hippocrates, Galen, and Celsus, and that the universality of the practice was shown by the fact, that the remains of such baths had been found in every colony of the Roman empire.

The author enunciated some novel doctrines, both as to the nature and treatment of phthisis. For instance: If tubercle be imperfectly organized fibrine, then it should be looked upon as a blood-disease; and seeing it is found in other parts besides the lungs without destroying life, its deposition in them should not be considered as disease either of the lungs or air-tubes, but as an accidental circumstance, killing mechanically by its ulceration extending to the surrounding lung tissue. Again, he called in question the propriety of sending consumptive patients abroad to a warm climate during any stage of the disease, as, although in the later stages of the complaint, when the air-tubes sympathized with the tubercular irritation, a warm atmosphere seemed more congenial to the patient's feelings, still in the earlier stages, when a cure was practicable, the breathing the open air of our winter (at least of the south side of our island) was most important; and he instanced as a proof that breathing cold air did not cause the complaint, the remarkable fact, that tubercular consumption is not to be met with in high northern latitudes.

The treatment of phthisis was considered under its hygienic and medical aspects. Under the former, and particularly in the earlier stages, the patient was recommended to live in a high, dry, and marine atmosphere, *on* the downs, rather than *under* them; to be as much as possible in the open air; to use all sorts of athletic exercises (avoiding such as accelerate the pulmonic circulation) suitable to the sex and strength of the patient, by which a more rapid change of matter is effected, together with absorption of already deposited tubercle, as well as the deposition of more healthy—i.e, of more highly organized, matter. Medically, the treatment was comprised in a few short aphorisms, the first and most important being, —Keeping the functions of the skin in healthy action by means of the hot-air bath. 2ndly. Anointing the whole surface of the skin daily with some oleaginous matter. 3rdly. Keeping a local ulceration always patent by means of an issue or seton. 4thly. The exhibition of some one or more of a large variety of tonic and antiseptic medicines—all admirable adjuvants in improving the general health, (if selected in conformity with the function most sympathizing with, and reacting on, the disease.) but powerless in arresting the specific lesion in question, without the previous "Open sesame" of the hot-air bath, followed by the aspersion of cold or tepid water. The author expressed himself as fearful of saying all that might be advanced in favor of this treatment in phthisis, seeing that the disease was universally considered incurable. He, therefore, urged the Society to try it for themselves, and be guided thereafter by its effects.

An animated discussion ensued, supported by Mr. Sedgwick, Dr. Handfield Jones, Dr. Headlam Greenhow, Dr. Browning, and Dr. Hart Vinen.

TRAUMATIC PHLEBITIS.

Dr. Stewart related the particulars of a case of phlebitis of the femoral vein and rupture of the internal and middle coats of the femoral artery, resulting from a blow. The vein and artery were exhibited, as well as a drawing of the parts taken at the time of the post-mortem examination.

The subject of the injury was a tall, pale, strumous girl of twelve years old. Whilst at school a fellow-scholar thrust a piece of stick up her clothes, and struck her violently on the groin whilst the leg was extended. The blow gave her much pain, and she felt very ill. The leg became stiff, and she walked home with much difficulty. Except aperients, no medical appliances were adopted for two days, when Dr. Stewart was sent for, and he found her feverish and very excitable. There was much pain along the course of the femoral vessels; the leg was swollen, and the skin of a dusky hue. The countenance was very anxious. Salines with antimony were ordered, and for two days she greatly improved; but on the third day the governess of the school came to see her, and soon after an angry interview the child sank and died.

The post-mortem examination showed the femoral artery as it emerges from beneath Poupart's ligament distended, and upon slitting it up the two inner coats were found torn. The femoral vein was injected, and blocked up with fibrinous deposit. The heart was filled with black liquid blood. It was difficult to assign the immediate cause of death in this case. Was it the escape into the heart of some of the fibrinous deposit from the vein, or was it simply the shock produced by the interview with the governess?

Mr. W. Adams, Dr. Camps. Dr. Pollock, Dr. Handfield Jones, Mr. Cleveland, Mr. Ballard, and the President, commented upon the case, and the general impression was that the escape of a fibrinous clot into the heart was not sufficient to account for death as the blood in the heart was fluid; that there was great depression produced by the phlebitis, and that in that state fatal syncope was readily produced by mental annoyance.

TAPPING IN EMPYEMA AND HYDROTHORAX.

Dr. Hamilton Roe mentioned a case of empyema occurring in a child twelve years old. The lungs were perfectly resonant, and there was no sign of tubercles. The heart was displaced to the right side. A small trocar having been passed into the pleura, a half-pint of pus was withdrawn, with perfect relief to the symptoms, and the child got quite well. In tapping the chest, Dr. Roe advised the use of a small trocar; and that, to prevent the admission of air into the pleura, the canula should be withdrawn as soon as the fluid ceased to pass freely from the tube. In long-standing cases of pleuritic effusion tapping was useless, because the fluid would collect again; but in more recent cases, provided the inflammation had subsided, tapping cured the patient at once, without having recourse to the depressing agency of mercury. The effusion which was developed during active inflammation was curable by general treatment, and tapping was not called for.

Dr. Pollock urged the early performance of this operation, as adhesions prevented the return of the lung and heart to their normal positions. He had observed the air pass freely into the pleuritic cavity in a case operated on at the Consumption Hospital, yet the patient got well. He would not advise tapping whilst inflammation was going on, nor in cases of effusion resulting from tuberculosis; but in passive effusion he thought the operation desirable. Slight effusion was cured by good diet. There was a class of cases not uncommonly met with in which there was crepitation above the water-line suggestive of tubercle, but which, in fact depended on the pressure produced by the effused fluid. In these cases tapping may be advantageously resorted to.

Dr. Hare had seen cases operated on which would have done well without operation. He had cured cases of pleuritic effusion by mild mercurial and other treatment in three weeks. In a case of empyema which he had seen tapped, fourteen ounces of fœtid pus were drawn off. The wound continued open, and there was a discharge for two or three years. The case occurred twelve years ago, and the patient was now well and in service.

Dr. Handfield Jones, Mr. Cleveland, Dr. Vinen, Mr. Weeden Cooke, Mr. Ballard, and Dr. Camps joined in the discussion, by whom it was urged that tonic treatment should not be forgotten in these cases; that iodide of potassium was a useful remedy; that the empyema mentioned by Dr. H. Roe was the exact counterpart of a cold abscess forming in any other part of the body; and that the operation of tapping was called for in double pleurisy, but might be avoided when one side only was affected.

Mortality of Children in Mines.—It appears from recent reports that the mortality in the mines, of children between the ages of ten and fifteen, is very great. The whole mortality is 11 1-2 per cent.; but that amongst children of the ages above mentioned is 22 per cent.

EPIDEMIOLOGICAL SOCIETY.

Dr. Babington, President.

Dr. Fraser read a paper on

CHOLERA AMONGST THE BRITISH TROOPS IN SCUTARI DURING NOVEMBER, 1855.

The outbreak of cholera, with which this paper deals, is briefly alluded to in the Blue Book of the "Medical and Surgical History of the British Army which served in the East," also by Drs. Lyons and Aitken.

The author does not enter into the vexed question of the contagious or non-contagious character of the disease, but infers that the first case which occurred on the 20th May, in the person of an Austrian sailor was of spontaneous origin. He then traces the disease, as seen by tables which he exhibited, as gradually incubating until the 14th of November, when it burst forth with volcano-like power, and attacked in the course of a few days 276 men, of whom 160 died. He adds, almost before the first panic had subsided all cause for fear had ceased, the terrible visitor having disappeared.

Several statistical tables are given, illustrating different points, and to which suggested comments are appended. Amongst the tables are six concerned with meteorology for six months preceding the outbreak. The author observes that information upon meteorology, in connexion with cholera morbus, becomes daily more important, and he throws out a hint that the British Army Medical Department might be made most available to this highly important purpose; for even if the information were negative, it would still have a relative value.

The author drew especial attention to three facts as corroborating previously recorded observations:—

1st. That the cases were larger in number, and, also of greater virulence, amongst those men living under unfavorable sanitary conditions.

2ndly. Unacclimatized men were most liable to be attacked.

3rdly. That a change of locality arrests the spread of the epidemic.

The pathology and treatment of the disease are not entered upon, save to observe that the chief morbid changes noticed were a highly vascular state of the mucous and peritoneal surface of the small intestines, and a remarkable "repletion with a creamy substance of the minute glandular apparatus of the same intestine, which has been named by Drs. Lyons and Aitken the sago-grain appearance.

The opinions as to treatment may be seen in the Reports of the Staff-surgeons on the station, "that all the ordinary remedies were tried, the only one observed to be of any use, and that only to alleviate the severity of the cramps, was the hot-air bath; and, says the Deputy Inspector-General, I regret to be obliged to confess that on this occasion we have learned but little, if anything at all, either as to the origin, nature, or treatment of this most inscrutable and intractable scourge of the human race."

WESTERN MEDICAL AND SURGICAL SOCIETY.

Dr. Anstie read the report of a case of

PERIODIC VOMITING.

The patient, a boy aged nine years, suffered from vomiting, which took place every Saturday, and nearly always at the same hour. The mother seemed inclined to attribute it to some irregularity of diet, but could not detect such. It was preceded by shivering and giddiness, and then the vomiting occurred for once or twice, after which the boy fell asleep. There was no dyspepsia in the interval, and he was well nourished, but the countenance exhibited a peculiar sallow appearance. Aperients, sedatives, and such like, were tried in vain; and then assuming its aguish character, quinine, in ten-grain doses every morning, was administered, and cured the symptom. There was a doubtful history of ague in the case with respect to the mother at a former period, and during the illness of the boy she seemed to suffer from tertian symptoms, which yielded to quinine. Special attention was drawn by the author to the length of interval between each attack —length of time not mentioned in any work.

Mr. Charles Hunter related the following particulars in connection with a case of

CHOREA.

The history was like that of most cases of the kind when occurring in a severe form, and had been treated by iron, purgatives, &c., without avail. Fearing exhaustion from the violence of the muscular exertion, the author administered small doses of the tincture of opium three times a day, gradually increasing the dose to five and ten drops, the child being twelve years of age. After five days from commencement of treatment, the amendment was apparent in the lessened restlessness and sleeplessness, and in the course of a few days the symptoms were cured. The patient had experienced two previous attacks while under the care of Dr. Fuller, who had given large doses of belladonna with no success, though it was tolerated. In the present attack the opium seemed to be of service in more ways than one; it deadened impressions and allayed excitability, and so induced sleep. Narcotics may be given in three stages of the disease. 1. At the commencement, when the disease is due to nervous excitability. 2. During its course, when the severity of the spasms threatens exhaustion. 3. At the end, when the patient suffers from loss of sleep.

Dr. William Ogle related a case of

PERIODIC MOVEMENT.

In this case, the woman, of advanced age, was subject to violent and persistent beatings with her hand for twelve hours together. She took quinine and support, but without corresponding benefit. The author then recommended carbazotate of ammonia one grain, three times a day, and it cured her after it caused yellowness of the skin. A relapse occurred, and the carbazotate of iron was administered for ten days, and cured the symptom, causing, at the same time, violent depletion from the nose.

Editorial.

THE SPECIAL HOSPITAL ABUSE.

Recent events invite the earnest attention of the medical profession and of the public to the spread of specialism in medicine, and the consequent growth of the excrescences called special hospitals. Few will dispute that some institutions devoted to the more or less exclusive reception of particular diseases are so far founded upon motives of administrative convenience, and possibly upon the demands of scientific observation and practice, as to stand in an exceptional position. But it is of the deepest importance to the interests of science and the welfare of the public that the just limits of the subdivision of medicine for the purposes of study should be defined and rigidly maintained. It may be generally stated, that special hospitals owe their rise partly to public opinion or prejudice, and partly to the demands of medical science, or, in more recent times, to the suggestions of medical enterprise. Amongst the earliest examples were lock-hospitals and infirmaries for the reception of epidemic or contagious fevers. Considerations, partly moral and partly hygienic, dictated the separation of persons afflicted with diseases of this class from other sick persons, and from the general community. Special hospitals in former times partook more of the nature of *cordons sanitaires* or quarantine establishments, than of the modern hospital. But in course of time a larger share of the scientific element became infused into these places. The consequence has been that they have acquired a sanction, and obtained a degree of respect to which they are entitled, if regard be had to the principles of their original foundation. Another consequence has been to reflect this borrowed sanction upon newer and less defensible special institutions. Hospitals for syphilis are still justified by public feeling. It is held to be an outrage upon the honest susceptibilities of poor people suffering from ordinary diseases to bring them into association with persons whose loathsome disorders are the result of, if not the punishment for, their vices. Acting upon this feeling,—a feeling which we think is overridden by higher views of national health,—well-meaning governors have actually voted the denial of medical relief to syphilitic patients. The case of fever hospitals, also, has no longer the basis in necessity that was once supposed to exist. Clinical observation has dispelled the delusion that the elimination of fever cases from the wards of general hospitals, and the aggregation of them in one focus, are necessary in order to obviate propagation by contagion. It is found that, so far from aggregation being the proper principle of treatment, the reverse one of diffusion—of scattering the cases—is the only proper way to dilute the fever poison to that degree of tenuity that it becomes inert. Practically, a fever case dropped into a ward full of ordinary patients does not become a focus of contagion. But for certain considerations of convenience, it is now a matter of experience that fever hospitals might be abolished with safety and advantage. And since syphilis is no longer excluded from most of our general hospitals, the support which the case for special hospitals has long derived from this source falls to the ground. If lock and fever hospitals have maintained their position in public and professional esteem, it is due to the earnest and enlightened scientific labors of the physicians and surgeons to whom the direction of them has been successively entrusted.

To what causes are we then indebted for the consecration of special hospitals to other individual diseases? We have no difficulty in admitting that the Moorfields Ophthalmic Hospital and the Orthopædic Hospitals arose in great measure out of the comparative neglect of ophthalmic and orthopædic surgery by the surgeons of our general hospitals. It may even be argued that success in the delicate operations upon the eye is the attribute of peculiar aptitude and special experience. But here, again, it has been found that ophthalmic surgery can be successfully prosecuted and taught in our general hospitals. And we have but to run over the names of the surgeons of the parent ophthalmic hospital to perceive that they are also distinguished as surgeons to general hospitals. We may draw the important deduction that the advances in ophthalmic surgery which we derive from these gentlemen are at least as much due to their general as to their special acquirements. They would not have been such good ophthalmic surgeons had they not been familiar with general surgery. Neglect of the pathology of the eye by hospital surgeons can no longer be urged as a plea for special eye hospitals.

The case for hospitals for lunatics stands altogether apart. Insanity by its very nature is excluded from general hospitals. The administration of institutions devoted to mental disorders is, indeed, distinct from everything else, not only by the special requirements of the insane, but also by legislative enactments. But even here specialism, although a necessity, is not without its evils. We are firmly persuaded that, although the patients may in many cases require isolation from the world, the physicians under whose care they are placed do not. These would benefit their patients not less, and science more, if they could mingle more freely with the outer medical world, and thus bring to bear a daily experience of general disease upon the morbid manifestations of the nervous system.

We have another class of special hospitals, the origin of which is essentially modern. There are some diseases which, by express regulations or from the pressure of numbers, are more or less excluded from the general hospitals. Of this class are institutions for consumption and cancer. Owing to the terrible frequency, and to the chronic if not incurable nature, of these diseases, the cases would accumulate to such an extent as rapidly to drive out everything else. Under such circumstances, hospitals, the most useful function of which is the relief of accidents and acute diseases, would degenerate into asylums. Only limited space, therefore, can be given to cases of consumption and cancer. Hence the plea for special hospitals. This plea is further enforced by the argument that special appliances, particularly in ventilation and warming, which would be injurious to many of the mixed cases of a general hospital, are an essential condition for the cure or amelioration of phthisis. To a large extent these arguments must be admitted, but they will hardly bear application beyond the instances of the two diseases now referred to.

The ear is another organ that has been taken under special protection, under the plea that adequate attention was not paid to its pathology in the general hospitals. We believe we shall not be successfully contradicted when we affirm that the argument for the ear is less strong than that for the eye. Hospital surgeons are, indeed, somewhat to blame for their neglect in abandoning the subject of aural surgery to the specialists. But there ought to be no difficulty in treating these cases quite as well in the out-patients department of the large hospitals as in the back-parlors dignified with the title of Ear Infirmaries.

Then there is the skin. Originally, no doubt, special institutions for skin diseases were held to be justified by the expediency of removing patients affected by contagious diseases from contact with other persons. But this argument is also worn out by experience. Nothing is easier than to administer the out-patient department of a large hospital in such a way as to prevent danger from this source.

Upon one plea or another, we thus find almost every organ and many individual diseases taken under special care. Beginning at the head, we find provision made for the brain, the eye, and the ear. The chest has several institutions consecrated to it. The more ignoble outlet of the alimentary canal boasts an hospital, placing itself, we know not on what special grounds, under the patronage of one of the Evangelists. The generative organs, male and female, are also made the objects of particular devotion. And now we are favored with an hospital for stone. The skin, which covers all, is itself eagerly seized upon. We even believe that an hospital for the joints is being projected. When this scheme shall have been carried out, it may be hoped that the rage for specialism will be checked for want of more organs to treat. A distinguished surgeon has, indeed, suggested that there remains the umbilicus. An hospital devoted to this section of the human body might truly be as useful to humanity, and present as fair an opportunity for appropriating the overflowing contributions of the charitable, as many that could be named.

MEDICAL ASPECTS OF CHARITABLE INSTITUTIONS.

Some few years back we made common cause with a literary cotemporary in censuring the great expenditure which the management of many of our charitable bodies entails; this expenditure being sometimes so great, and apparently—to us at least—so often unnecessary, as to wrongfully deprive many objects of that relief which funds better husbanded might have been the means of bestowing. We remarked at the same time upon another abuse—for we cannot call it anything less—which unfortunately attends the administration of certain charities. It is this: that many of them which embrace a scientific as well as a charitable scope, are niggardly in their contributions derived from experience within their walls towards the progress of knowledge. Many of the great eleemosynary institutions of our island are capable of furnishing highly valuable information upon vital statistics, such as the frequency of particular diseases at certain periods of life; the influence of locality, special employments, and past habits, upon present health and its future continuance; whilst some could even directly help in the cure of disease. Yet they are all silent as to such matters; the merest humdrum routinism of a few pages of "annual report" is all that they present. The wealth of this country is bestowed, and with an unsparing hand, to sustain Asylums for the Blind and for the Deaf and Dumb, Magdalens for Fallen Women, Nurseries for Orphan Infants, Schools for Children; not to say anything of such extensive establishments as the Chelsea and Greenwich Hospitals. In some of these institutions there are associated together, and ready for continuous and close observation, great numbers of persons suffering under some particular misfortune or disease. In others we have a crowd of aged persons, who have passed lives of warfare with climate and their fellow-men, and have endured all kinds of hardships between the tropics and the poles. Here is a mass of young children who have scarcely completed their first dentition; there, at a Female Orphan Asylum, some hundreds of young girls; at a "Bluecoat School," of boys, all of whom are not only liable to the same ills as are their fellow-creatures, but must often present such modifications of them as are known to arise from the peculiar circumstances which necessarily and usually surround the inmates of our large asylums. There is scarcely any of such places which is not capable of furnishing much aid in the advancement of science. The Magdalens might be made to confirm or to correct many of the deductions of Parent du Chatelet as to the results following a sudden cessation of a free, open-air, reckless mode of life, and the assumption of confinement, sedentary occupation, and penitential seclusion, in place of great emotional and physical excitement. We are told that the reclaimed and confined prostitute, though previously in a state of *embonpoint*, is apt rapidly to emaciate and to die of phthisis. Though she loses her hoarse voice, she is prone to lose all her spirits too, and becoming first weary, then melancholic, she finally ends with an attempt at self-destruction. On the other hand, some, not having self-determination to go on in penitence, or too weak to resist temptation, quickly return to their lives of freedom and of shame. Now, are our Magdalens devoid of medical surveillance, or if provided with it, what has it to say? From our many institutions for children, we have a right to look for some slight contributions to that branch of Medicine which has made such great progress in recent times—viz. *pædiatrics*. The maladies occurring before puberty are either in themselves peculiar, or else receive a particular stamp from the age of the constitution in which they occur. But no; not from any Orphan Asylum do we learn anything concerning the exanthemata, the so-called "remittent fever of children," hereditary syphilis, disorders affecting the skin, contagious scalp diseases, &c. It would be important to know what conclusion their medical officers have arrived at regarding the opinion that *rubeola* is a distinct affection, or only a bastard one, made up of a mixture of the poisons of *morbilli* and *scarlatina*; or, again, that it is but a modified form of either of these latter two diseases, which has escaped being properly diagnosed. For aught we know, the whole question is lost sight of by those who have at once the best means, and abundance of them, by which it might be settled. It is possible that some kinds of official medical reports exist amongst the sheets annually deposited in the archives of the Hospitals of Chelsea and Greenwich. But they must be, we conceive, of a very meagre description, and certainly they have no influence upon the progress of medicine, and are unknown to, or unreachable by, medical *littérateurs*. And yet we want some comment upon Canstatt's treatise, "On the Affections of Advanced Life." The researches of MM. Hourmann and Dechambre need support and verification, and there is a wide field for morbid anatomic investigation left apparently unworked. All this is not as it should be. We have a right to ask for some further information from the executive of public institutions than the mere number of persons that eat, drink, and are clothed within their walls, and what it costs for their management.

This topic has been recalled to our mind from having lately received the "Report, for 1860, of the asylum for Idiots, Earlswood, Red-hill, Surrey," with a request that it might be noticed. Being ever willing to lend a helping hand to the combined efforts of benevolence and the relief of physical suffering, we took up the "Report," hoping to meet with something that might be interesting, *quoad* the treatment of idiots. We were sadly disappointed. We found the pamphlet to consist of twenty small octavo pages, seven of which were taken up with the list of patrons, county banks, &c., supporting the Asylum, together with receipts and expenditure. We have then barely five pages of a general report, which chiefly informs us that "the physical and mental progress of the past year have been every way satisfactory." Finally follows the "Report of the Medical Superintendent," consisting of eight diminutive pages. What sort of scientific exposition of the proper physical and mental treatment of idiots these eight pages can afford, we need not say. Now, be it remarked, here is an establishment which has been in existence for thirteen years containing more than 300 idiot children, which last year expended no less a sum than £15,000 in its support, and which commanded £9444 4*s*. 4*d*. in annual subscriptions and pupils' payments. Surely we should not be asking too much for some more valuable contribution towards our knowledge of the rational treatment and statistics &c. of idiocy every five or ten years from such a special asylum than is included in this flimsy yellow pamphlet? We are not the only grumblers in this matter. Those who have made it their special duty to unravel the peculiarities of diseased manifestations in early life have, it would appear, received a check where they least expected it. If the reader will refer to the last edition (1859) of the Lectures of Dr. Charles West upon "The Diseases of Infancy and Childhood," he will find the following remarks:—

> "The causes of idiocy, the influence which our knowledge of them should exercise on our prognosis, the relations of epilepsy and of paralysis to it, and the extent to which their existence should modify our opinions. are only some amongst several very important questions to which I can do no more than refer as requiring elucidation. I trust that before long those regulations of the Idiot Asylum which close its doors against medical men for the purpose of study, may undergo some modification; or at least that the medical officers of the institution may feel it to be their duty, and may find it to be within their power, to furnish some information on subjects so important and so little understood, and to our knowledge of which they have hitherto contributed absolutely nothing."—p. 254, *op. cit.*

In the Report before us we are, it is true, informed thus far, that "the presence of local disease is scarcely known amongst the inmates, and a more vigorous state of health has been secured to many who were more or less delicate and unhealthy." We do not doubt the truth of this statement, which relates, however, only to two small items in the scientific history of deficient cerebral development and mental manifestations. But neither are we satisfied with the simple assurance alone, that these unfortunate children "are classified and employed according to their capacity and progress. Commencing with exercise of the most simple nature, aimed to secure order, obedience, attention, imitation, and speech, they are gradually instructed to," &c. For general distribution amongst the supporters of this noble charity—for such it really is, and, therefore, worthy of the interest it excites—such a Report as is now before us may be sufficient. But to think that science at large is not to reap any benefit from an institution which for more than ten years has undertaken the charge of hundreds of idiot children, and spent many thousands upon their treatment, is really enough to make us disappointed, if not downright angry. It is opportune to suggest that this is a "special hospital."

THE QUESTION OF TITLES.

In the present position of the profession, the question of titles has become one of the most serious and important that can occupy the attention of our governing bodies. We confess that the subject is involved in much doubt and obscurity; but it is one that must, sooner or later, be grappled with and decided. Every post brings us letters of inquiry as to the status, rights, privileges, and titles of gentlemen who have taken degrees from Universities, or who have obtained licences from Colleges of Physicians. Is it creditable to us as a profession that doubts should exist upon such important matters? Such doubts prevail in no other profession. The General Medical Council have hitherto scrupulously avoided taking any decisive steps with respect to this subject. When appealed to, they have returned at best but evasive answers. The reason of this is obvious. The Council have not the power to make satisfactory replies. But should this state of things continue? Surely not. It is, therefore, the bounded duty of the Medical Council to immediately take such steps as will effectually solve what may be a great, but certainly cannot be regarded as an insurmountable, difficulty.

It is evident from the late proceedings in Edinburgh, that Universities and Colleges have views of so contracted a character that they would perpetuate a monopoly with respect to titles which is not consistent with the welfare of the medical profession. It is only natural that corporate bodies should endeavor to obtain for their members exclusive rights and privileges; but it is a question how far these endeavors tend to enlightenment and progress. The advance of public opinion, and the great strides which have lately been made with regard to medical education are sapping the foundations of monopolies. The Lancet, from its earliest number, has advocated the "one-faculty" system. That plan, if honestly carried out, would solve the difficulties of the "situation;" and whatever may be said to the contrary by those who desire to perpetuate a vicious system, the tendency of the age is all but universally in favor of its adoption.

CLEANLINESS UPON SUNDAY.

What poor people may rightly do upon the Sunday, and what they should not, are very disputable questions. We would refrain from being either very lax or very stringent. There is always most safety in a "happy medium." It is surely not swerving from this judicious path to say we certainly think that the poor should be allowed to *wash themselves upon the Sabbath.* All, however, it would appear, are not of this opinion. The inhabitants of St. George's, Hanover-square, are disposed to repudiate it. There has been a threatened resolution of the Vestry to enact for the future that the baths situate in Deavies street, Bekeley-square, and in Lower Belgrave, Pimlico, shall be closed against the public during the Sabbath. Throughout the west of London the public baths and washhouses are open from six until nine o'clock upon Sunday morning. Are the poor artizans of St. George's so well washed upon Saturday night as not to need anything further upon the following morning? Do the laundresses leave their baskets of clean linen with them over night? Or do Hanoveria and Belgravia scout the idea of having any poor within their patrician limits who require washing? Almond soap and marble-topped washhand-stands, we admit, are common in St. George's, but they are not universal. On the contrary we can assure the good and fashionable Vestrymen at Hanover-square that there are rooms within their district which can scarcely boast of a cracked basin, a piece of yellow soap and a quart of soft water, not to say anything of dry, clean towels. For such, then, who cannot or will not find opportunity to wash themselves and their clothes on Saturday night, we would yet offer them the power of becoming sweet and clean upon Sunday morning. Cleanliness, we have been told, is next to godliness, and hence we would feel bound to permit a step being made, however late, in the right direction. If all these acts were prohibited from the poor upon Sunday, we should yet put in a claim for washing. It is certainly not a crime, nor idleness, nor should *we* regard it exactly as an amusement or as a relaxation. It is possible that the poor may look upon it as an occasional joke to be clean, and if so all we say is—pray let them enjoy it. The Sabbath, moreover, was made for man, and not man for the Sabbath.

CASE OF GARDNER *VS.* HARRAP.

The report of the trial of Gardner *vs.* Harrap (p. 260) is not unworthy the attention of the profession. Mr. Harrap, an "irregular practitioner," appears to have a "great reputation" for a certain successful mode of rubbing which he employs in diseases of the joints. Rightly or wrongly, he has obtained some amount of celebrity. We have been told that many eminent surgeons, not only in London, but in the country, are in the habit of recommending Mr. Harrap as a "rubber" in cases of intractable joint disease. If this be the case, and it be assumed that the evidence given upon the trial by the plaintiff was substantially true, it will appear that Mr. Harrap occasionally makes a poor return for the patronage which is bestowed upon him. It may be asked why it is necessary to hand over cases of chronic joint disease to an "irregular practitioner." Surely any old woman could effect the same amount of good by the exercise of patient rubbing; and if she acts under the special guidance of an educated surgeon, she would be less likely to inflict such permanent injury on the patient as appears to have been sustained by poor Mr. Gardner. Whether "the young man named Bennett" and "a Dr. Hilbers" were in a position to pronounce the defendant's treatment as "very skilful" in this particular case would appear to admit of a doubt. At all events, the jury did not attach much importance to their evidence, for they gave a verdict for the plaintiff to the amount of £300.

Surely it is for the interest of the public that diseases of the joints, whether acute or chronic, should be under the care of regularly qualified surgons.

Death of Professor Taddei.—This distinguished Professor, member of the Piedmontese Senate, and of the National Academy, died at Florence of the 29th ult. He had risen to great eminence in the Natural Sciences and Chemistry.

Reviews and Notices of Books.

Transactions of the Obstetrical Society of London. Vol. I., for the year 1859. pp. 347. London, 1860.

Could we for the nonce assume the garb of Cassandra, we should feel inclined to utter a note of warning to the Obstetrical Society of London. In a hollow voice, *secundem artem*, we would say,—"Beware! It is more difficult meekly to bear success than to submit to defeat with good grace. An institution, like an individual, which too early aspires to honors, must prepare to encounter, not only the opposition of interest, but the malignity of envy. A Society which ascends the rounds of the ladder of fame too quickly may have a dangerous fall." And we should speak thus because it is probable that no scientific Society has ever met with the same amount of success in a like space of time as the one whose first volume of "Transactions" now lies before us. Only sixteen months ago the inaugural meeting was held at the Freemasons' Tavern, and now we find the Society comfortably lodged in Berners-street, and numbering amongst it four hundred Fellows all the most distinguished obstetric physicians and surgeons of the day. Moreover, such have been the papers read at its monthly meetings, that it has been able to issue a volume, which for general interest and merit will bear comparison with the "Transactions" of any medical corporation in any country. As, therefore, the drapery of the mythical heroine above mentioned is nearly threadbare, and as it is certain that shabby garments do not become us, we will conduct our fortune-telling, not through tephramancy—which for the benefit of the unlearned it may be explained means by consulting writings in ashes,—but rather by hieromancy; and we will take as the sacrificial appearances, which this method demands should be laid before us two or three out of the various essays that fill the present volume.

Now at the beginning it may be noted that the work is made up of forty-one separate contributions; and of a valuable, because simple, form for the registration of obstetric cases, which has been drawn up for the use of the Fellows by the honorary secretaries. Amongst the several authors we find Drs. Rigby, Tyler Smith, Robert Barnes, Tanner, Graily Hewitt, Oldham, Druitt, Waller, Gibb, Harley, Uvedale West, Elkington, Clay, Priestley, and others; and we think the names of these gentlemen are a sufficient guarantee that the volume must contain some good reading. It must not be supposed that we endorse all the various observations and suggestions which are scattered through the three hundred and fifty pages of which the book is composed. On the contrary, were we so inclined, it might be easy without running the risk of being deemed hypercritical, to point out many deductions to the correctness of which we should demur; but we must be understood as giving our praise from a general review of all the subjects treated of.

One remarkable feature in the volume is the merit of the papers contributed by gentlemen in general practice,—those invaluable members of society who are commonly supposed to have less time for literary avocations than the consulting and hospital physicians. The first important communication of this kind which we come across is by Mr. Harper, "On the more frequent use of the Forceps as a means of Lessening both Maternal and Fœtal Mortality." This gentleman's experience extends over twenty-one years, and his record of cases includes all those attended by himself, by the assistants who resided with him, as well as by an assistant who lived at a branch surgery. When it is mentioned that Mr. Harper has thus had 8 cases in twenty-four hours, 27 in a week, and 65 in a month, and that "20 cases a week was of comparatively frequent occurrence," we have said enough to show that his views have really been gathered from bed-side experience. The statistical results, as drawn from Mr. Harper's own private records—that is to say, not including consultation practice—show 6053 midwifery cases. In these, the long forceps were used 99 times, or 1 in 61; and the short forceps 133 times, or 1 in 55 cases. In the same period, the long forceps were used 53 times, and the short forceps 17 times, in consultation cases. Very remarkably, the 6053 cases only produced an equal number of children. This circumstance seems the more strange, inasmuch as the women of mining districts are generally supposed to be particularly obedient to the law, "increase and multiply," in all its bearings. Now, we know that twin births occur, to speak in round numbers, once in every 80 cases all the world over, and Mr. Harper may reasonably have calculated on being blessed with triplets at least once in his long medical life. Yet his words—and we quote them to prevent any misconception—run thus: "The number of midwifery cases, of which I have a record up to the time of deducing the following results, was 6053." (p. 174.) "My own statistical results, as drawn from my own private records, are, 6053 children, of whom 207 were still-born." (p. 183.) As we are unable to find a clue to this mystery in any part of the essay, let us pass it over, and proceed to notice, that in 6053 cases there were, breech presentations, 74; feet, 101; arm, &c., 59; and placenta, 18. The number of craniotomy cases was 16, or 1 in 378. From all labour causes, 1 mother in 831 died: but excluding peritonitis, the maternal deaths were 1 in 1490. The forceps were used 232 times, or 1 in 26. The paper concludes with an attempt to prove that no special maternal risk attaches to the use of the forceps, and that where death has occurred it has been owing to these instruments being employed too late.

Mr. Robert Dunn has a long communication with the title of "Statistics of Midwifery, from the Records of Private Practice." By this paper we are able to gather a summary view of the obstetric records for twenty years of the busiest period of the author's professional life. In this time Mr. Dunn has recorded 4049 cases. Of these, after deducting 228 for premature births and abortions, there were 2133 males and 1688 female children. In regard to plurality of children, there were 2 cases of triplets and 45 of twins, in the great majority of which both the children were in connexion with one placenta. The total maternal mortality was 27. The forceps were not applied "more than 20 times during the 20 years." The craniotomy cases were 10. Excluding the 228 premature births, there were 170 still-born children. There were likewise 12 cases of puerperal mania, 4 of convulsions, and 6 of phlegmasia dolens. Amongst Mr. Dunn's greatest achievements in midwifery practice, he notes the personal attendance on 7 labours in 30 hours; while in one day, in 1832, when the influenza raged almost universally, he visited and prescribed for 70 patients, and attended 3 midwifery cases.

A third statistical paper is furnished by Mr. Bailey, of Thetford, giving a report of this gentleman's practice from the 2nd of July, 1808, to the 31st of December, 1858. The births during these fifty years amounted to 6476, of which 3290 were boys and 3186 girls. In these births there were 53 cases of twins and 1 of triplets. The head presentations were 6120, leaving 356 preternatural cases. Of these latter, the face presented in 40, the arm in 44, the funis in 21, the feet in 180, the belly in 9, the breech in 45, and the placenta in 17. The maternal deaths seem to have been 13. There were only two cases of craniotomy, and instrumental aid was afforded in 112.

The foregoing observations will have their desired effect if they lead our readers to consult this first volume of the Obstetrical Transactions for themselves. We can only assure them that in doing so their time will not be misspent; for the majority of the essays are not only interesting but instructive.

Operative Surgery, adapted to the Living and Dead Subject. By C. F. Maunder, F.R.C.S. by Examination, &c.; Translator and Editor of Ricord's "Lectures on the Duality of Chancre, but the Unity of the Syphilitic Poison." Part I. pp. 144. London: Churchill.

The author of this work, a former demonstrator at Guy's Hospital, found that students complained of the want of some handbook of operations, and with the view of supplying the deficiency has compiled this little manual. The present part, which we presume has been issued in readiness for the summer courses, comprises all the minor operations, the ligature of arteries, and the resections. It is illustrated by sixty-six woodcuts, which, though not very beautiful in an artistic sense, fully serve their purpose; and we are glad to find the author stating so plainly in the preface that a large number of the illustrations have been borrowed (with permission) from foreign authors.

Mr. Maunder devotes a chapter and a few illustrations to bandages and apparatus, and then passes on to the treatment of nævi, cupping, venesection, arteriotomy, &c. In the fifth chapter he gives the process of ligaturing all the main arteries of the body; and we must here say a word of praise both as regards the descriptions and the illustrations, which latter are appended to almost every artery. The author has evidently frequently performed, and, what is perhaps better, has superintended the performance of, the the operations on the dead body, and he is therefore able to indicate those points at which blunders are most generally made; and since his book is obviously more likely to be used over the dead than the living body, this is a matter of no small moment. Only one who has frequently seen the mistake made, would give such cautions with regard to the steps in ligaturing the posterior tibial artery—a vessel, it is true, of no great practical importance, but still often asked about at the practical examinations now so much in vogue. Amongst eight cardinal rules which the author lays down to be observed in the ligature of arteries, we are very glad to find—"4th. Use a sharp rather than a blunt instrument to divide tissues,"—for we feared lest, from old association, he might favor the unscientific but Parisian fashion of tearing out the artery with a steel director. No practice can be worse; and, though inculcated in another manual on the same subject, we trust that our surgical youth will not be led away thereby from Mr. Maunder's third rule—namely, "to disturb the relation of the artery to its sheath in the least necessary degree."

The latter part of the book comprises the excisions of joints and bones, beginning with the jaws, and so downwards throughout the body; and the operations are well described, though we are inclined to doubt the applicability, or at least the superiority, of the chain-saw in all the cases for which it is recommended. We should be sorry, moreover, to see so much bone removed from an elbow as is figured at page 112; and surely the author does not imagine that there is such novelty in a semilunar incision for the removal of the knee that he should narrate so circumstantially the fact of his having performed the operation at Woolwich, when he was "kindly assisted" by four gentlemen, whose names are given in full! This, and a somewhat similar narrative *apropos* of the hip, are two little blemishes which should be removed in a new edition, for it is a pity that a really useful book should be damaged, as it must be, by the "puff oblique." We would also venture to suggest to Mr Maunder some alteration in his title page, as we cannot but think it better for the author of a work on operative surgery to be announced as holding office in both an hospital and medical school, rather than as the translator of lectures, which, however valuable in themselves, have nothing to do with the subject in hand. These are little matters of taste more than anything else, but will have their effect in aiding or preventing the general adoption of the book, and it is for that reason we point them out, as we believe the work to be in every way worthy of success.

Clinical Lectures on the Diseases of Women and Children. By Gunning S. Bedford, M.D., Professor of Obstetrics in the University of New York, &c. Sixth Edition, carefully revised and Enlarged. pp. 653. New York: Samuel and William Wood.

The remarks which we made upon this work when reviewing the fourth edition (The Lancet, 1857), might be applied to the present issue, did it not happen that nearly four years have elapsed between the two publications. So far as the first five hundred and sixty-eight pages are concerned, the two editions are word for word the same. In the volume before us, we merely find a few extra formulæ, and two additional lectures; which latter are devoted to all manner of subjects. The chief of these are, for example, ovarian dropsy, prolapsus uteri, suppression of the menses, concealed pregnancy, puerperal mania, chlorosis, tapeworm, polypus, hydrocephaloid disease in an infant, epilepsy, albuminuria, &c. Of course it is not pretended that more than the most cursory observations are made upon any one of these topics. In fact, the remarks are just of that description which are to be heard directed every day to the students in the out-patient rooms of our hospitals; and this being the case, it need hardly be said that the lectures are not of a nature admitting of critical examination.

It is much to be regretted that the author has not carried into execution the expression "carefully revised," which appears on the title-page. Had he done so, we should not have found obsolete views on the *decidua vera* and the *decidua reflexa*, which can only mislead, stated as well-received facts; or, if the author disbelieves the evidence afforded by recent researches, to the effect that the decidua is merely the hypertrophied mucous membrane of the uterus, some reasons for his heterodox opinions ought at least to be given, if only out of respect to his readers. Again, no obstetrician of any standing now entertains the notion that the disease known as *hydatids of the uterus* can exist independently of conception—"in the same way that polypi, fibrous tumours, and various other substances, sarcomatous and osseous, are occasionally found in the virgin womb." Dr. Bedford may, of course, have good reasons for holding this extraordinary opinion; but we who are anxious to discover the truth, can scarcely be accused of making an extravagant demand when we ask for something beyond a bare assertion, in order that we may accurately judge for ourselves. It is rather hard, too, upon such men as Dr. Robert Barnes and others, to find their laborious investigations completely ignored; and it is painful to see students erroneously taught, as we think, just as if these gentlemen had never written. One more illustration of the justice of our complaint out of many that could be selected, is to be found in the lecture devoted to *uræmia*, in which there is no notice whatever of the important essay by Braun on the same subject, nor of Dr. Simpson's specious arguments in favor of the use of chloroform in this serious affection. In fact, the lecture quite fails of its purpose if it is intended to assist the student in the treatment of a case of uræmic poisoning; and such intention, we take it, ought to be the grand aim of every writer of a clinical discourse on this subject.

It cannot be too strongly impressed upon an author that the pages of no scientific book will admit of being stereotyped. For any teacher to say, "Thus far has knowledge reached, and here shall be its limit," will be as futile as for another Canute to attempt to stay the advancing tide by his kingly order. Every intelligent worker at practical medicine feels that his art is improving almost daily, and that it cannot but continue to do so. Hence, he who has the opportunity of speaking to his professional brethren through the medium of a new edition must be content to labor hard to make his work keep pace with the progress of knowledge; and if, through idleness or from want of leisure, he rests content with merely issuing a reprint, he must not be offended at learning from the critic the unpleasant truth that his writings are behind the age, and are not deserving of that confidence which has previously been bestowed upon them.

Elements of Chemical Physics. By Josiah P. Cooke, jun., Erving Professor of Chemistry and Mineralogy in Harvard University. pp. 739. Boston: Little, Brown, and Co. London: S. Low and Co.

This volume forms a complete system of Chemical Physics. Though Kopp and Regnault, on the Continent, have done much to illustrate this particular department of chemical science, we have had till now no adequate treatise on the subject in the English language, unless we except the excellent volume by Prof. Miller, the first of his "Elements of Chemistry." But in the book before us, the application of mathematics to the subject is more fully demonstrated than in Dr. Miller's treatise, though this nicety of demonstration removes it from the domain of student's class-books, and fits it rather for the scientific experimentalist, who may find such knowledge a necessity. Equations, symbols, and curves are now frequently employed in the enunciation of physical laws, and our author shows here that he can use them with dexterity and advantage.

The work commences with an account of the general properties of matter, and a sketch of the mechanical forces. The three states of matter—the solid, liquid, and gaseous—are then treated in detail. Next is examined the property of adhesion or attraction. Lastly, the agency of heat is described, and considered in all its bearings. Examples of the intelligent way in which the author treats his subject may be found in his account of the thermometer and its aberrations; and of Mariotte's law of the indefinite compressibility of gases, with the exceptions that must be taken to it.

All questions connected with the states of matter must be thoroughly understood before we can enter with any certainty on those processes of weighing and measuring on which experimental chemistry depends. This treatise, as we said above, is anything but elementary; it is complete in its way, and the scientific chemist will find it of great value. The woodcuts are good; they are copied from those in the French work of Ganot.

Observations to accompany the Map of the Shadow-Path thrown by the Total Eclipse of the Sun on the the 18th July, 1860, across the North eastern part of Spain. By Charles Vignoles, F.R.S, M.R.I.A., Fellow of the Royal Astronomical Society, &c. pp. 65. London: Longmans.

Mr. Vignoles' map and description will be found admirable guides to such as intend visiting Spain to witness the total eclipse of the sun upon the 18th of July next. This eclipse will be a remarkable one, as the period of absolute obscuration approaches very near to the maximum time that this phenomenon can last. The moon will be in perigee—that is, at her nearest point to the earth, on the 20th of July, when her apparent diameter will be greatest; and the sun was in apogee, or at its farthest point from the earth on the 1st of July, when his apparent diameter was least.

"When an eclipse takes place on the same day on which the moon is at its nearest and the sun at its furthest distance from the earth, the maximum time of the duration of total eclipse on the central line of the shadow-path is four minutes. On the present occasion the period of duration will be about three minutes and a half."

Mr. Vignoles not only points out the chief astronomic and general scientific features of this interesting event, but provides the reader with very useful information concerning traveling, hotels, custom-houses &c., in the peninsula.

Medical Annotations.

"Ne quid nimis."

THE PROGRESS OF MEDICAL SCIENCE.

The elaborate oration with which Lord Wrottesley inaugurated the Oxford meeting of the British Association, expressed in words of dignified eloquence the varied progress of scientific research during the last year. With the natural predilections of an accomplished astronomer the new President dwelt at length on the phenomena of the heavens, and the result of recent astronomical research, especially the confirmation of the opinion, that space is filled with ether, by the observation of comets, and the connexion between magnetic storms and changes of the sun's surface, illustrated by the curious observations of Mr. Carrington and Mr. Hodson, who simultaneously witnessed what "may be the process of feeding the sun by the fall of meteoric matter."

The sympathies of every well-educated man with the achievements of the many laborers in the multiform vintage of science are sufficiently strong to render the whole of Lord Wrottesley's speech very interesting to most medical practitioners, for it conveys a comprehensive review of the year's progress towards higher knowledge in all matters of science. A special interest attaches to one paragraph in which the advances of physiology and medicine are mentioned in the thoughtful and well-devised argument. As a mathematician, Lord Wrottesley may be expected to feel strongly the disadvantage of the inexactness of Medicine, and though he may be disposed to attach too great a value to the geometric analysis of life, or the chemical investigation of disease, yet it is well to remember that the want of accuracy, though it be inherent in our art, is, nevertheless, a grave defect. The astronomer may truly tell us, that in astronomy and mathematics, or mechanics, there are no quacks, and if Medicine were an exact science there would be none amongst us. Repressive legislation must prove inefficient to prevent quackery, which at best it will only modify. But the application of rigid laws of inquiry, and accurate methods of statement, would do something to diminish the obscurity of Medicine, which, as a cloud, favours their twilight tricks.

"In the recent progress of physiology, I am informed that the feature perhaps most deserving of note on this occasion, is the more extended and successful application of chemistry, physics, and the other collateral sciences, to the study of the animal and vegetable economy. In proof, I refer to the great and steady advances which have, within the last few years, been made in the chemical history of nutrition, the statics and dynamics of the blood, the investigation of the physical phenomena of the senses, and the electricity of nerves and muscles. Even the velocity of the nerve-force itself has been submitted to measurement. Moreover, when it is now desired to apply the resources of geometry or analysis to the elucidation of the phenomena of life, or to obtain a mathematical expression of a physiological law, the first care of the investigator is to acquire precise experimental data on which to proceed, instead of setting out with vague assumptions, and ending with a parade of misdirected skill, such as brought discredit on the school of the mathematical physicians of the Newtonian period.

"But I cannot take leave of this department of knowledge without likewise alluding to the progress made in scrutinizing the animal and vegetable structure by means of the microscope—more particularly the intimate organization of the brain, spinal cord, and organs of the senses; also to the extension, through means of well-directed experiment, of our knowledge of the functions of the nervous system, the course followed by sensorial impressions and motorial excitement in the spinal cord, and the influence exerted by, or through, the nervous centres on the movements of the heart, bloodvessels, and viscera, and on the activity of the secreting organs—subjects of inquiry, which, it may be observed, are closely related to the question of the organic mechanism whereby our corpereal frame is influenced by various mental conditions."

MEDICINES AND PERFUMES.

Medicine seeks now to assail all the senses, and to reach the body through all the avenues of physical or mental approach. Vapors, baths, and aqueous dust are greatly favored by some of our modern Æsculapians; and refinements of physical stimulus and mental control are employed of which the elder physicians had no cognizance. One department of therapeutic study has, however, been little cultivated—it is that of perfumes. Looking to the active qualities of many of these perfumes, and the marked effects which they are capable of producing, it is probable that a therapeutic study and classification of the various series according to their bases might be serviceable to the physician. An able chemist recalled lately at the Society of Arts some of the authorities and reasons which might justify a belief that there is a future of usefulness for the therapeutic student of modern perfumes:—

"Criton, Hippocrates, and other ancient doctors classed perfumes amongst medicines, and prescribed them for many diseases, especially those of a nervous kind. Pliny, also attributes therapeutic properties to various aromatic substances; and some perfumes are still used in modern medicine. A certain class, however, of our medical men entirely prohibit the use of scents, pretending that they are injurious to health. In this I think they are mistaken. It is true that flowers, if left in a sleeping apartment all night, will sometimes cause headache and sickness; but this proceeds not from the diffusion of their aroma, but from the carbonic acid they evolve during the night. If a perfume extracted from those flowers were left open in the same circumstances, no evil effect would arise from it. All that can be said is, that some delicate people may be affected by certain odors; but the same person to whom a musky scent would give a headache might derive much relief from a perfume with a citrine basis. Imagination has, besides, a great deal to do with the supposed noxious effects of perfume; and Dr. Capellini relates the story of a lady, who fancied she could not bear the smell of a rose, and who once fainted at the sight of one of those flowers, which turned out, after all, to be artificial. Numerous examples might be adduced, on the contrary, tending to show that perfumes are beneficial and prophylactic in the highest degree. After the Dutch had destroyed by speculation the clove-trees in the island of Ternate, that colony was visited by a series of epidemics, which had been kept off until then by the fragrant smell of the cloves; and in more modern times, when London and Paris were ravaged by cholera, there was not, to my knowledge, a single victim among the numerous persons employed in the perfumery factories of either city. In fine, we are prompted by a natural instinct to seek and enjoy pleasant odors, and it is unreasonable and unjust to suppose that Providence has endowed us with this discerning power to mislead us into a pleasure fraught with danger."

PROFESSIONAL MAXIMS.

The difficulties and the honors of professional life, the value of labor, and the failures of genius, are subjects which can never grow trite and wearisome to the mind of the professional reader. Few men will read without interest the words which Lord Stanley addressed to the students of University College in presenting the successful candidates with their hardly-earned prizes. He told them that real work—work which will stand the test of time and the criticism of competent judges—can never be the result of hasty, careless, or desultory efforts. The rapid intuition, the sweeping glance, the ready analysis, and the triumphant argument, in which we admire the skilfulness of a born genius, are the evidences of trained thought and well-drilled intelligence, of which the schooling has often been secretly accomplished. So that facility becomes a measure for previous labor, and readiness an index of early preparation. The students were warned, too, against an error which many hundreds of members of the medical profession must now deplore. They were told that when once a man has thrown himself heart and soul into the turmoil and anxiety of professional life, there is not for him much more—in ninety-nine cases out of a hundred there is no more—of that free and liberalizing study which developes not one faculty, but all the faculties of the mind. There is an universal and almost irresistible impatience to burst the bonds of college discipline, and to spring into active life. The phrase is—to waste no time, but to buckle to the work of life at once. But time spent in study, while the habit of mental application is yet strong and the mind vigorous and impressible, is not lost; it gives such a perfection of mental culture as heightens all the powers, and helps at once to happiness and success. Wisely did Lord Stanley say to these young men—"Study as long as in prudence you can, and don't fear that life will not be long enough to reap what you have sown." It is almost to be regretted that any are permitted to engage in the active pursuits of life, as in our profession, when just of age. The young man of twenty-one, who will give three years to study and mental cultivation, will always look back upon the time so spent with pleasurable satisfaction.

ECONOMICS OF PUBLIC CHARITIES.

There are, as everybody knows, *two* ways of living: the one being, living *within* your means, the other, living *beyond* them. Both private individuals and public bodies adopt one or the other method, according to their different views of personal enjoyment and happiness, and the proper mode of getting on in the world. Plain and prudent people, who think "honesty the true policy," who are satisfied with moderation in the present, and with laying in store for the future, adopt the first way of living; whilst dashing and jovial folk, who always like to see the "pot boil," sing *carpe diem*, and let the future take care of itself, follow the second. Whilst one cuts his coat according to his cloth, the other acts upon the principle that there is nothing like keeping up appearances. Live plainly, within your means, and who will care for you? Make a show, though beyond what you can legitimately afford, and everybody will court you. In the former case it will be often apparent how little your custom is sought, though you are sure to pay for what you have; in the latter, it is wonderful how apparently sensible tradesmen will esteem it, though it must be more than doubtful they will ever be paid for what you order. Strange infatuation truly, that there should be less anxiety to be honestly dealt with by the "people," than to be taken in by the "quality." But so it is, and not in private life alone, but in public also. If a charitable institution lives within its income, or puts by a few pounds yearly to a permanent stock, and renders a plain and straightforward account of its stewardship, always carried on with reference to the means entrusted to it, such an institution meets with comparatively but humble recognition. But let it spend yearly all, or more than, it can get, or sell out its reserved stock, and live upon that; build architectural additions, and run into all sorts of extravagancies *quoad* its income, and it will be strange if, with some ingenuity, the public is not brought to patronize the promising establishment. For getting on, then, both at home and abroad, there is nothing like having plenty of "go" in you. But most things have their drawbacks, and living beyond one's means is apt to be met by the common misfortune. A screw will get lose somewhere, and then the whole machine threatens to stop, or to fall to pieces. The butcher has just sent in a lengthy bill, for the settlement of which he is becoming extremely unpleasant. Appearances cannot be much longer preserved, and so Boulogne is visited. Or the secretary informs the public that the treasurer has not sufficient money in hand to pay the builder for the new wing, and that if the public does not come forward again pretty liberally, the "Board" will not be able to open it. As regards the results of such private and public calamities, there is often some little difference. The family who "lived in such style" is apt to go, not only to Boulogne, but to the dogs, whilst the institution is patted on the back, receives increased donations, and becomes still more fashionable. Concerts and fancy fairs do it honor; sermons and theatricals make up purses for it. Only let i get into debt on a sufficiently extensive scale, and there is no limit to the kind consideration which the public has for the spendthrift institution.

We have very recently been helped to a forcible illustration of this peculiar principle of our social economy. St. George's Hospital is, it would seem "in difficulties." It has come imploringly before the public, and confessed that its habitual expenditure exceeds its income by £6000 per annum. Between 1830 and 1859, it reached an endowment, from legacies, donations, and life subscriptions, of £225,000. Of this £25,000 have been expended upon the new building, and further, as a remonstrating Governor's letter in *The Times* informs us,

> "The Weekly Board have thought it right to expend capital to the amount of £200,000, (during a space of thirty years,) in addition to their income on the current expenses of their establishment, and have thus contracted a habit, which they are very unwilling to relinquish, of living upon their capital instead of on their income; consequently they now find themselves compelled to proclaim, that as their habitual expenditure exceeds their income by £6000 a year, the public must either subscribe in future £10,000 a year, instead of £4000, or several wards of the Hospital must be closed."

Now, we freely admit with the remonstrant Governor, that whilst there are not any grounds for imputing malversation of funds, or jobbing, to anyone connected with the administration of St. George's Hospital, there are sufficient reasons for looking with a severe eye upon its improvidence and reckless expenditure. If the data &c. before us are correct, it would appear that had the now spent £200,000 been invested in the public securities, and had the management been content with spending only the interest of their capital along with their ordinary income, it might at present have had an endowment of £325,000, the interest of which, combined with other revenue, would have placed the Hospital of Belgravia in a most enviable position. And what are the arguments likely to be urged in vindication of the opposite and unfortunate method which has been followed? The remonstrant Governor tells us, that

> "The arguments by which the Weekly Board defend the course which has brought them to the present pass, and of which they are still prepared to maintain the propriety against every argument, save the convincing one of want of money, are, that it operates as a salutary laxative on the public purse-strings; that the more good they ostensibly do, the greater chance they have of obtaining further subscriptions and legacies; that the benevolent are especially disposed to be generous to hospitals in difficulties—i. e., to hospitals managed with improvidence; and they even go so far as to attempt to demonstrate, by reference to their books, that every sacrifice of capital they have made in order to reconcile a small income with a large expenditure, has been providentially followed, sooner or later, by a large legacy."

Well, then, as our remonstrating friend aptly remarks, if the system of expenditure in reference to means, adopted at St. George's, be a good system, our having drawn attention to it will not do it any harm and it rather deserves the compliment. But if it be, a bad one—if prodigality urged to recklessness—if living upon capital instead of upon income. be plans which, sooner or later, must come to a stand-still, why then it equally behoves us to bring it forward as an example Whether good or bad, then, be the economics of Hyde-Park Corner, we feel it our duty, as public journalists, to let the charitable and subscribing public judge for itself.

MRS. JENNER.

Is not it a reproach to England that anyone bearing the name of Jenner should be in want? Yet twice has the claim of Mrs. Elizabeth Jenner, the widow of Dr. William Henry Jenner, the grand-nephew of the Discoverer of Vaccination, been defeated in her endeavor to find a shelter for the close of her days in the Royal Medical Benevolent College. For a third time she is a candidate. We feel a sting of shame at being compelled to publish such a fact to the world. We hope that the medical practitioners of Jenner's native land, and those especially who are governors of the College, will make the cause their own, and rescue their country and their profession from a reproach that weighs heavily upon us all. Until the election of Mrs. Jenner is secured, no one should feel at liberty to exercise his privilege as a governor in favor of an inferior claim. There are names, noble and ignoble, the mere possession of which entitles the wearers to a refuge from poverty, or to endowments for education. The name of Jenner is not one of these; but it ought surely to command the active sympathy of every member of that profession which Jenner may be justly said to have endowed with a perennial inheritance of honor.

As some systematic and steadily-directed efforts are necessary to secure the end in view, we earnestly recommend that every governor should make the claim of Mrs. Jenner a standing entry in his visiting book; that he should lose no opportunity, by correspondence or otherwise, of soliciting votes; that, in short, every one of us should make the case his own personal affair. We publish the details of Mrs. Jenner's claims in our advertising columns; we shall in this and other ways continue to remind our readers of the matter. We shall be happy to receive promises of support forthwith, and intend from time to time to publish lists of adherents to the cause—a cause in which the national honor is concerned.

AN UNIVERSAL HISTORY OF LEPERS AND LEPER-HOUSES.

Recent discussions on leprosy in this country have shown that, although the subject possesses considerable interest for English physicians, amongst us it is rather a question of traditions than of existing facts. It is remarkable how much variance of opinion and obscurity of view are manifested whenever the matter is broached. Certainly a malady of which the ravages are described in the most ancient historical records, for which richly endowed asylums and lazarettos still exist in great numbers, and which even now attacks many thousands in divers parts of the world, is worth zealous study. Professor Virchow, of Berlin, an inquirer favorably known throughout the scientific world for his great pathological acquirements and voluminous contributions to medical literature, has taken the occasion of the large number of physicians, historians, and travellers of various countries now collected in this metropolis, to address to them an appeal for assistance in composing a History of Leprosy (Lepra Arabum, Elephantiasis Græcorum, Spedalskhed). The information which he will receive from this country will, no doubt, chiefly comprise references to or extracts from volumes and records of the past. But even these possess a high interest, in so far as they refer to the foundation of leper-houses, to their management by the clergy, and to the circumstances which determine the admission of lepers into these establishments, and their separation from the rest of the community. It is, however, probable that some important observations in connexion with the disease, as at present existing, might be contributed by physicians residing in the northern British Isles, where the fish diet, damp climate, rude habits, and poor living are believed still to foster the embers of this dying disease. The large field of observation which the importation of diseases through our wide maritime connexions adds to the ordinary practice of British hospitals and infirmaries may afford some further data of remark. Professor Virchow expresses a particular hope that every one will rest assured that any contributions, however small, will prove acceptable. The points on which information is desired include the locality of existing or formerly existing lazarettos; their date of foundation; their capacity for patients; their statutes and plan of administration; if suppressed, at what date, and to what other purposes they were turned. Again, in relation to the disease, the information desired resolves itself into queries as to the present state of leprosy; its past sites, when first, and when last mentioned; the forms observed (Lepra tuberculosa, anæsthetica, mutilans, articulorum, morphœa); the known relations, if any, of morphœa and other forms of lepra. Then, is the disease endemic or sporadic? Is it attributed to inheritance, contagion, climate, humidity of atmosphere and soil, or food, as fat or fish, salted or otherwise? It remains, too, to learn whether there is any known treatment for leprosy; and a deep human interest is concerned in the collection of any practical laws affecting lepers, involving their solitary confinement and prohibition from marriage. The question of the mode of propagation of disease is always one which closely touches the interests of civilization. In the case of leprosy, history will probably be made to testify to hideous instances of wide-spread suffering, which may also prove to be examples of mistaken oppression. So many thousands are still affected by the just solution of the question that the international comparison of the observed history and phenomena of leprosy possesses a contemporaneous and vital importance. No doubt Professor Virchow will be enabled by this appeal to collect the materials for a judgment. The inquiry can only successfully be carried out by international aid, and in availing himself of the opportunity afforded by the Congress, the learned Professor affords a fresh testimony to the value and uses of such a meeting. On future occasions it may be hoped that the more widely important question of the mode of propagation and history of plagues, such as cholera and yellow fever, may undergo international investigation; for it was justly remarked by the President of the Sanitary Section, that the determination of these facts would confer a moral and social benefit on the nations of the world, hardly inferior to any boon which science could impart; and this, with many other great problems in etiology and connexion of wide-spreading epidemics, are in a state ripe for searching investigation.

THE HEALTH OF THE LEGIONS.

THE curious may find a nice subject for thought in balancing the later intellectual acquisitions of our race against the lost treasures of ancient lore. If there be literally nothing new under the sun, the study of that which is old in contrast with the new must always remain fertile in interest. Without sympathizing with the retrogressive principles of the strict material interpreters of the royal axiom, we may often listen with profit to the *laudatores temporis acti*, who remind us that part of the time spent in pursuing further developments of knowledge may sometimes be as usefully employed in the review of the solutions worked out long since. It is rarely that any theory is prominently discussed and emphatically affirmed, or any proposal newly started and much debated, but we learn, after a while, that our new idea is only a very antiquated one in a novel disguise, and that we are filching from ancient stories without recognition; so that, on the whole, it might sometimes be doubted whether during the last few centuries we have learnt or forgotten more.

We have heard lately of nothing more frequently than military hygiene. Military hygiene, we are told, is a new science; even its principles remain to be established, and the mode of carrying them out is only partially determined. Dr. James Bird, the late Physician-General to the Bombay Army, is of another opinion; and, speaking with an intimate knowledge of all that relates to the sanitary organization of modern armies, he affirmed the other day, in a lecture before the military authorities of our United Services, that "all the sanitary provisions of military hygiene which, through the public press and the authorities, have been enjoined in this country on all concerned, as if parts of a new science discovered but yesterday, were fully appreciated and acted upon by the Roman commanders." Dr. Bird starts with the enlightened proposition of Vegetius, the great Roman authority on military organization, that want more often destroys an army than battle—that famine is more terrible than the sword: "Sæpius enim pænuria quam pugna consumit exercitum et ferro sævior fames est." He shows that they omitted no precaution to provide against the contingencies of disease amongst their troops, and to adopt means for preserving the health of their soldiers. Encampments, marshes, water, heat, cold, exercise, diet, and clothing were all studied in their relation to the health of the soldier and the efficiency of the army; and in instituting investigations into the science of military hygiene, we appear to be reviving an old Roman art, but by no means creating a new one.

CAPTURE OF WHALES BY MEANS OF POISON.

To the apprehension of the uninitiated, any attempts such as those described by Dr. Christison to the Royal Society of Edinburgh under the above title, would suggest a primary difficulty not unknown in relation to far smaller objects of pursuit; since the poisoning might more easily be conceived as contingent upon capture, than the capture as capable of being effected by poisoning. The enterprise of catching whales by poisoning them at large on the high seas is undoubtedly a toxicological experiment of unusual dimensions; and Dr. Christison confesses that when first the proposition was made to him by the late Messrs. W. and G. Young, then engaged in the whale fishery in the Arctic and South Seas, he could not for some time entertain it seriously. But explanation begat inquiry, and inquiry led to trial. It should be premised that trials have only led to failure; but as nothing occurred in those trials to contradict the expectation of success, and as late improvements in the knowledge of poisons strengthen that expectation, Dr. Christison thinks that he may render service by now making the facts public. The first experiment dates as far back as 1831; but a sense of the commercial value of the secret, and a feeling of honorable regard to the interest of the firm who were concerned in the undertaking, have imposed reserve, to which the death of those gentlemen, and the cessation of their representatives from the trade, have now put an end.

The experience of harpooners shows that the major number of escapes effected by whales, both in the northern and southern latitudes, arises from the fleetness with which they run after being stuck. In the Arctic Seas they make rapidly for the nearest mass of ice, and diving beneath its edge, emerge only at some distant blow-hole, and most frequently are lost. The spermacceti whale of the South Seas runs straight ahead, and several boats are necessary to maintain the communication between the ships and the harpooners. It was desired then to employ some means of striking into the whale a rapid and powerful poison, which, if it did not destroy life, should at once paralyse motion. Dr. Christison selected hydrocyanic acid as the substance which best answered these requirements. The average maximum bulk of the whales caught was estimated at about forty tons weight, and forty feet length, for each animal. It remained, therefore, to provide poison suitable to such a living mass. Considering that one drop of pure hydrocyanic acid, if struck in the flesh of a man weighing about two hundredweight, would suffice to procure instant death, Dr. Christison calculated that two ounces, or 480 drops, would be a sufficient dose for a whale of forty feet and forty tons. The preparation of large quantities of pure hydrocyanic acid offered at that time some difficulties which were successfully overcome, and means were devised for introducing the poison into the barbs of the harpoon in such a manner that any strain upon the weapon when plunged into the whale would fracture the bottle and let free the poison. A whaler was provided with these poisoned weapons, but the only effect of this first stock poison was nearly to kill the chemist of the ship; for an eight-ounce bottle broke while he was manipulating it, and it was only by rapidly fishing him up through the hatchway with a boat-hook, and promptly applying restoratives, that his consciousness was slowly restored and his life saved. The ship was next night crushed between two fields of ice and the experiment ended. Subsequently in 1833, the *Clarendon* was despatched, also armed with poisoned harpoons. On this occasion the Messrs. Young did not consult Dr. Christison, and he does not possess accurate information; but from accounts received through Dr. Patterson of Leith and through Dr. Andrew Fleming, of this and another vessel, he is disposed to believe that the proceeding was attended with a considerable share of success. Twenty-four whales were killed by the *Clarendon*, and six lost: she returned with a larger cargo than any whaler had brought in for many years. The reports of an eye-witness to the first harpoon used in this vessel state that when a whale was struck she "sounded'—that is, dived 'perpendicularly downwards to a great depth, and presently reappeared, floating on the surface and dead. The effects are described as being tremendous, but the men were afraid of cutting up their capture. Various rumors of similar and successful attempts have from time to time reached home, bearing a considerable degree of circumstantiality, but no ascertained results exist.

Dr. Christison points out that the discovery that hydrocyanic acid may be preserved unaltered for a great length of time in hermetically-sealed tubes, materially favors the employment of this substance in any future attempts at capturing whales by poison.

STEPS TOWARDS AMALGAMATION OF THE MEDICAL SOCIETIES.

The idea of uniting the various large Medical Societies into one body, which should represent the total interests of scientific medicine with a greater efficiency than the scattered and isolated Societies which are devoted each to a special department of scientific medicine, has been more than once ventilated, and lately was ably discussed. In all such measures there are two points for consideration—the expediency and the practicability. There can hardly exist any diversity of opinion as to the admirable purposes which would be served by an harmonious union of the great Societies under one organization, and their assembly under one roof. The difficulties which have hitherto impeded the realization of this idea have been mainly practical. They concern the time, place, manner, and conditions of amalgamation. Recently, a stronger impulse has been imparted to the movement towards unity by an intimation of a feeling privately existing in official quarters that any Society which, by its numbers, importance, and the incorporation of the various elements of the profession, might be considered as in the main a fair scientific representative of the medical body, would be favorably considered in an application for Government recognition and lodgment in the new buildings about to be erected for such purposes at Burlington House.

The opinions of the Councils of the various Societies are tolerably unanimous as to the question of the desirability of amalgamation. The initiative in the matter has been taken by some of the Council of the Medico-Chirurgical Society. A conference with the leading members of the Council of the Pathological and other Societies, has resulted in a general expression of adhesion to one plan of union, of which the leading feature would be the constitution of a General Society, somewhat resembling the continental academies, at the head of which would be the Medico-Chirurgical, and which would possess Medical, Surgical, Pathological, and Obstetric Sections. A moderate subscription-fee would give the membership of any one section in which an individual might be particularly interested.

This general outline obtains common assent; other questions will, of course, remain for adjustment should this union be effected. The title of the new body would require consideration. The Medico-

Chirurgical Society holds its title and constitution by charter, and any change would involve a resignation of that charter; but then, a new one might be obtained. The relative privileges which would be acquired by the present members of such Society in relation to the others, is also a matter which presents some points on which some diversity of opinion necessarily exists. But it may be earnestly hoped that minor differences will vanish before the common desire to take one further step towards that unity of organization in which the medical profession has been so long deficient, but which, if attained, would so greatly enhance its power, usefulness, and prosperity.

PARISIAN MEDICAL INTELLIGENCE.

(FROM OUR SPECIAL CORRESPONDENT.)

I WAS disappointed in the hope expressed in my last letter respecting the close of the discussion at the Academy on the action of perchloride of iron. I had underrated M. Piorry's powers, and I consequently beg his pardon. For two mortal hours on each of the two succeeding Tuesdays did that excellent gentleman detail to the long-suffering academicians his views upon vitalism, animism, and organicism. Nothing daunted by the sight of fast emptying benches, the Professor of the Charité enunciated his opinions with a minuteness that an unkind critic might have qualified as prosy, but which I will confine myself to designating elaborate. As all these views have been published by M. Piorry in his numerous works, and as *no one* has ever disputed their priority, I shall not further dwell on the subject, merely mentioning that Bouillaud, whose turn it now is to speak, announced at the end of the meeting that he would consent to address the Academy on one condition alone—that being, that M. Trousseau should be present; "for," said M. Bouillaud, "I wish first to know what he is, and when he has answered this question, and has told me to what school he belongs, I will discuss the subject with him, and not till then." It is supposed that after this challenge, M. Trousseau can hardly venture to absent himself from the Academy, as he has done for the last month.

Goître; removal by the écraseur.—M. Chassaignac, of the Hôpital Lariboisière, some years ago drew the attention of the profession to certain enlargements of the thyroid body, which, although apparently insignificant from their smallness of volume, yet, from their unyielding density of texture and prolongation along the trachea into the chest, not unfrequently proved the case of a degree of disturbance in the respiratory function amounting at times to suffocation. To this variety of goître M. Chassaignac assigned the epithet of "constricteur," recommending in all cases, when feasible, the immediate removal by operation of the tumour.

In one case, specially dwelt upon by this surgeon, so considerable had been the pressure exercised by the enlarged gland, that the pneumogastric nerve had been flattened out through several inches of its course, like a piece of tape. In this patient, the dyspnœa, added to the constant recurrence of a violent form of neuralgia, made existence intolerable; and not until the autopsy (for death occurred suddenly) had revealed the condition of the pneumogastric trunk were the symptoms, inexplicable during life, ever referred to the compressive action of the small and seemingly innocuous goître. The enucleation of the whole of the thyroid body is a most grave affair; the hæmorrhage from the large bloodvessels, divided so close to their origin from the main trunk, is something fearful, and most difficult to control,—such attempts having on more than one occasion necessitated the ligature of both common carotids.

An example of the "goître constricteur" presented itself last week in the wards of M. Chassaignac, and this surgeon resolved on using the écraseur to effect the extirpation. The patient was a lad of sixteen; the tumour was small, apparently as big as a full-sized walnut, but peculiarly firm and low down in the neck, near the sternum. Much distress was complained of, and very slight pressure caused the breathing to assume a spasmodic, gasping character. Chloroform having been administered, the boy lying on his back with a narrow bolster under his shoulders and the head well thrown back, an incision was made with the écraseur through the skin and successive layers of cellular tissue and fascia down to the surface of the enlarged gland. The isolation from surrounding tissues was effected by the finger, and the chain of the écraseur passed round the base of the tumour, so as to include all its fibrous and vascular connexions. The handle of the instrument was worked at the rate of one notch per half minute, and in about twenty minutes the whole of the thyroid body came away. The size was that of a small orange; in density and texture it much resembled a fowl's gizzard, and was traversed in all directions by large vessels, some of them exceeding a goose-quill in calibre. There was a little oozing, which was controlled by a small bladder of ice; and the patient shortly afterwards awoke from his chloroformal lethargy, highly delighted at feeeling his throat freed from the pre-existing constriction.

It struck me, during the operation, that the écraseur might be employed with advantage in craniotomy on children. The trachea might with this instrument be reached and laid bare in five minutes by a bloodless incision; and I feel sure all who have tried the operation on a child will fully appreciate such a benefit. With regard to the écraseur, I think M. Chassaignac is becoming a little more discriminating in its employment; he has had the good sense to stop short of that narrow frontier which divides the honorable practitioner and the valuable medicament from the charlatan and his panacea, and has thus avoided the danger he would otherwise have incurred by "riding the willing nag to death," and bringing into discredit one of the most useful additions to modern surgery.

There is much summer diarrhœa is the hospitals just now; the weather is changeable, and fruit abundant, so that we have both the catarrhal and dyspeptic forms of this complaint. M. Trousseau, in his wards of the Hôtel Dieu, is treating both classes of diarrhœa with ipecacuanha, in large doses, and says he is most successful in his cures, which are more rapid than those obtained by any other means he has hitherto attempted. He says that ipecacuanha is as much of a specific in catarrhal or irritative hypersecretion of the mucous membrane as is colchicum in gout.

It is impossible for an Englishman, in going through the hospitals here, not to be struck by the capricious and experimental nature of the practice now in vogue. At home, the routine of treatment adopted in one hospital differs little from that in another. What is ascertained to be good by one is copied very readily by the rest, without recourse to academical arbitration or without giving rise to discussion about priority. This never-ending struggle for priority is, at the present moment, one of the greatest stumbling blocks to scientific research. Men are led to seek novelty irrespectively of utility. The rich vein of ore is often abandoned simply because others have already worked and enriched science from that source. I believe that this competitive system in hospital practice, if tested by statistical calculation, will be found to exercise a most baneful influence upon the main object of this branch of charitable relief—namely, the preservation of human life. This great object is not sufficiently borne in mind in France, and many great and really good men are, I think, carried away by the current, which, as a body, they would certainly have the power, but lack the courage, to stem.

Paris, July 30th, 1860.

M. Bouillaud, as announced at the previous sitting of the Academy, mounted the tribune on Tuesday last, in order to take his part in the discussion on the action of iron. (I must here notice, parenthetically, that the special question has long since merged into the wide and general problem regarding the nature of those forces which preside over the varied relations between the human economy and the outer world.)

M. Bouillaud commenced by saying that as M. Trousseau had not confined himself to the simple questions treated of by the reporter, but aimed a blow at opinions which medical schoolmen, since the days of Hippocrates, had held as valid, and which were still very generally accepted as data, he believed it a duty incumbent on himself to rise with a protest against the promulgation of such wanton heterodoxy. M. Bouillaud had professed his unwillingness to proceed to discussion in the absence of M. Trousseau, his reason being that he wished to hear, *vivâ voce*, from the Professor of the Hôtel Dieu, what were the medical tenets upon which he grounded his opinions; the colors, in fact, under which he was sailing, so as to direct him in the choice of weapons for the attack.

M. Trousseau, though evidently taken aback by this unusual mode of challenge, set himself with much fluency to the rehearsal of the articles of his *credo*. "I believe," said he, "in the endowment of all human organs with functional power, and with a disposition to the exercise of that power; thus far I am an organician. I also believe in the existence throughout the body of a substratum of free and immaterial principle. This principle I hold to be, in the language of M. Dollfus, totally unconnected with the *pôt-au-feu* of the company—i.e., with the ordinary functions; but possessed of manifestations peculiar to itself. These I term vital properties: and this is the extent of my vitalism."

M. Bouillaud was apparently surprised at finding that his adversary's opinions were so like his own; but said that he was glad to find that so far they were agreed, and that he should now begin his consideration of M. Trousseau's able speech, by calling the attention of the Academy to one of the facts therein taken for granted, and which he, as an old practitioner, must protest against passing without scrutiny. He referred to the so-called case of chlorosis, cited with such confidence, and serving as the basis of so important a superstructure. "I have practised for a great many years," said the speaker, "I have seen as many cases of chlorosis as most men in a similar position, and yet I have never had the fortune to witness one case traceable to an origin similar to that assigned by M. Trousseau. I never met with a case of chlorosis *brought on* by checking the menstrual flow in the way alleged; nor did I ever see a case of chlorosis *cured* simply by the reproduction of the retained monthly discharge—indeed, I should be much obliged were M. Trousseau to present me a patient fulfilling the above (according to him very common) conditions. I believe the cases, alluded to are *not* examples of chlorosis."

M. Bouillaud did not resent the epithet of *chimiatre* as applied to himself. Hippocrates also was a *chimiatre*. He availed himself, at least, of all the feeble aid that infant chemistry afforded, and his was an example worthy of imitation. At this period of M. Bouillaud's address, "a great change," as Mrs. Gamp would have said, "came over him for the worse." The clever and caustic prologue, and the exordial catechism of M. Trousseau, degenerated into a peroration, abstruse, unconnected, and dull in the extreme—an embodiment of the most tedious and sedative matter of Paley, Whewell, and Somerville combined. That occurred, which will occur when speakers, tired of this practical, material world, soar above their audience and digress into metaphysics. Reporters stared, dropped their pens, and looked desponding; academicians yawned, dropped their chins, and fell asleep; and the effect of what might have been a telling speech, was utterly and irrevocably lost. M. Bouillaud was meanwhile quarrelling with Descartes about his organicism, poking a deal of solemn fun at the absurd theory he had been forced to adopt of the existence of a fire without light, supposed to animate the organized body. He dwelt tenderly with Bichât and his hypothesis of vital property; he was civil to Newton, but deprived him of a great slice of his hitherto undisputed priority in the matter of gravitation; he discussed at length the views propounded by Barthez, and his vitalistic dogmata; and the close of the meeting still found him cross-questioning and brow-beating these witnesses and their various allegations. Let us hope that next week may bring us something a little more practical and less dreamy.

Treatment of Gleet.—Everyone knows how tiresome and difficult to cure a gleet may become, and how weary of each other both patient and surgeon occasionally grow in consequence. A little "dodge," which may not have yet crossed the Channel, and which I have seen succeed here, when the whole armament of balsamics, injections, and derivatives had failed, is the following:—Take a moderate-sized wax bougie (the common yellow wax ones are the best), warm it slightly, and then roll it for a few seconds in well-powdered alum; when thoroughly whitened with the salt, roll it between the hands so as to press the alum well into the wax, and the instrument is ready for use. Make the patient micturate previously, and then pass your bougie, without the assistance of oil or cerate, as far as may be deemed advisable, cutting it off to within an inch of the orifice of the meatus, where it may be tied or not, and left for one hour each day. In this way a tiresome and refractory old gleet may be cured in ten days.

Paris practice: new style.—One of the drawbacks to such a system of practice as that followed by M. Trousseau—namely, novelty-hunting—is the impatience with which any return to old-fashioned modes of medication is tolerated by the circle of admiring copyists, the volunteer *claquers* of the performance. In going round with M. Trousseau a day or two back, we came upon a case of lead colic, newly admitted; and M. Trousseau dictated the prescription as follows; an emetic of ipecacuanha, an enema of nut oil, a dose of bolus theriacalis in the evening, and low diet. "But that is as old as the hills," murmured out one recalcitrant follower, the Aaron of the company—a truth which the Professor was forced to admit. This trifling remark, however, reminds one of the fact that M. Trousseau has saddled himself with an unpleasant and thankless task—namely, that of having indefinitely to cater novelties and original modes of treatment for the fast-palling tastes of his numerous audience.

Another of the Paris practitioners who has struck out much in the same manner, though rarely in the same direction, as M. Trousseau, is Dr. Beau, of the Charité. Although not very happy in some of his therapeutic innovations (the employment of carbonate of lead in phthisis for example, the virtues of which consist in anticipating by medicine what nature generally effects by disease), this physician possesses many of the qualities of a good clinical teacher. He has much originality of conception, and great happiness and facility of expression. I should call him the Brinton of Paris were he a few years younger, and there is, I think, considerable resemblance between the general tone and texture of the two minds. M. Beau's practice is always decided, and undertaken with a definite purpose. His clinical remarks are particularly interesting and suggestive. Some of the favorite methods of treatment are the following:—In typhoid fever, continued purgation to the amount of ten or twelve stools daily, he uses castor oil, croton oil, seidlitz water, tartar emetic, &c., varying the drug each time the effect is to be produced. In acute rheumatism, he begins with antimonial emetics (*ad plenum vomitum*, to last a day at least), and then gives large doses of sulphate of quinine. Ascites, if without grave complications, he taps and treats with injections of iodine as readily as a case of hydrocele. I have merely jotted down the above as specimens, and I strongly recommend any countryman about to visit Paris to note down Dr. Beau's service at the Charité as one of the indispensable "memoranda and agenda."

Paris, Aug. 6, 1860.

MEDICAL TRIALS.

OXFORD CIRCUIT—OXFORD, JULY, 14th.

CIVIL COURT.—(*Before* MR. JUSTICE HILL *and a special Jury.*)

GARDNER *v.* HARRAP.

Mr. Serjeant Pigott and Mr. Gray appeared for the plaintiff; Mr. Huddleston, Q C., and Mr. Phipson for the defendant.

The plaintiff in this action, Henry Gardner, was a farmer at Chipping Norton, Oxford, and he sued the defendant, Mr. Henry Harrap, a sort of surgical practitioner of great repute at Brighton, to recover damages for negligent and unskilful practice as a surgeon in treating the plaintiff for the cure of a bad knee.

It appeared from the plaintiff's evidence that in the year 1857 he had taken a cold, which brought on a rheumatic attack in his knee. The joint was inflamed, and he was confined to his bed for several weeks, and, as the result, the knee became contracted. Under the advice of his medical attendant, Mr. Farwell, he went to Bath, and remained there for several weeks, under the care of a Mr. Wood, a surgeon, who advised rubbing the knee. On the 11th of October, 1857, he left Bath in improved health, and returned to Chipping Norton, where, under Mr. Farwell's directions, the knee was rubbed every day for two hours. On the 18th of December he went to Brighton, and consulted the defendant on his stiff joint. The defendant was an irregular practitioner, but he had a great reputation and large practice. He assured the plaintiff that there was no disease in the knee, but the joint was drawn up in consequence of very improper treatment. The defendant rubbed in some white ointment, and then put on some large plasters, which covered the limb from above the knee to as low as the ankles. The plaintiff told the defendant he thought he must have come to the wrong man, as he expected to be shampooed; but the defendant said there was no mistake, as he was the only Harrap in Brighton, and he was a spinal surgeon. He said he could cure him in six weeks, as he had no disease in the joint. Upon this the plaintiff put himself under the defendant's care and treatment. The treatment consisted in the application of a strong lotion laid on wet cloths, which the defendant called putting the "leg in pickle." The lotion was very strong, and smelt like ammonia, and caused the plaintiff great pain and inflammation in the leg. The plaintiff complained of this to the defendant, but he consoled him by telling him that he could not expect to be cured without going through a considerable degree of pain. However, he put on a milder lotion, and substituted a milder plaster—viz., a lemon-colored plaster for one of orange color. Matters went on thus till February, 1858, when some reference was made to payment at the rate of £2 for three visits; but the defendant told the plaintiff that he had never charged him anything, neither would he till he cured him. In the month of April, 1858, the plaintiff had taken cold and felt very ill, and was satisfied that some matter was forming in his leg, and, by the advice of the defendant, a Dr. Hilbers was called in to prescribe. In a few days a swelling in the leg broke, and the plaintiff in the month of June complained of a shivering in his back, and said he believed more matter was forming. The defendant then said the plaintiff's spine was affected, and he applied his lotions and plasters to his back and body. The plaintiff soon afterwards complained of pain in his head, and the defendant assured him that he had a softening of the brain, and applied his white lotion to his head. Upon this point the plaintiff admitted the defendant was right, for, he said, if his brain had not been "very soft" he should not have continued under the defendant's treatment so long. However, the plaintiff left Brighton on the 11th of October, 1858, and was confined to his bed for seventeen weeks; but he had since recovered his general health, though his knee, owing to the defendant's unskilfulness, was permanently contracted, and he could not walk without a crutch. The defendant used to speak in strong terms of condemnation of the practice of medical men, and said that they wanted a "hanging day" amongst them, because they applied leeches. It appeared on the cross-examination of the plaintiff that the defendant had attended him a hundred and seventeen times, his attendance extending from half an hour to two hours each time. The defendant had also brought an action against the plaintiff to recover payment; upon which the plaintiff brought the present action to recover damages for the defendant's negligent and unskilful treatment.

Several surgical witnesses were called, and gave evidence that the defendant's treatment of the plaintiff's leg was unskilful and improper. These were Mr. Farwell and Mr. Wood, and a third surgeon, named Taylor, who attended the plaintiff when he left Brighton, and their evidence was supported by a surgeon of the city of Oxford.

On the part of the defendant, evidence was given that he was ill, and unable to attend the trial; but his assistant, a young man named Bennett, was called, and also a Dr. Hilbers, and according to their opinions, the defendant's treatment was very skilful and generally successful. There appeared to be no doubt that the defendant enjoyed a considerable reputation, and had a great number of patients, and it was urged on his behalf that this action was brought only with the view to evade payment of the defendant's demand for his long and attentive services.

The jury ultimately found for plaintiff—Damages £300.

YORK, JULY 14TH.

(*Before* Mr. Baron WILLES.)

ALLEGED MANSLAUGHTER BY A QUACK DOCTOR.

George Swinson, a quack doctor, was charged with the manslaughter of John Batty, on the 22nd of March last, at Sheffield. The features of the case were of an extraordinary character, differing materially from ordinary cases of manslaughter, the prisoner having, it was alleged, caused the death of John Batty, by gross and culpable negligence in the treatment of a disease under which the person was laboring. Batty, it appeared, was a sheep-shear-maker at Grimesthorpe, and the prisoner was a toll-bar-keeper at Pitsmoor, both of which places are in the neighborhood of Sheffield. The prisoner had obtained considerable popularity in his practice as a quack doctor; and Batty, having a wound upon his leg, was induced by Swinson's reputation to visit him. The prisoner on looking at the wound, which was in the neighborhood of some large bloodvessels, made an application to it which caused considerable pain. On four other occasions the prisoner treated the wound, which on each visit was enlarged in size. The last occasion was the 22nd of March. After leaving the prisoner, the deceased proceeded on his way home, but when he had got about half way, the pain which he was suffering became so intense that he cried out for assistance. A person coming up to him found blood flowing from the leg of deceased's trousers, and endeavored to remove him to a stable close by. The deceased fainted on his way, and died from loss of blood after he had been laid down about twenty minutes. A post-mortem examination of the body of the deceased was made, when it was found that caustic had been applied to the wound, and had eaten through the vein in its vicinity. The deceased's death had resulted from loss of blood. The prisoner, on hearing of the death of this patient, remarked that it was a bad job and that it would be a "York job" for him. For the prosecution, it was urged that the death of the deceased had been caused by the ignorance and rashness of the prisoner. Mr. D. Seymour, however, urged in defence that the evidence showed that the vein which had been ruptured was in a varicose condition, and had burst from over-exertion. The jury acquitted the prisoner.

LIQUOR AMMONIÆ IN VENOMOUS WOUNDS.—We find in the *Bombay Times and Standard* of the 22nd ult., a letter from a Superintendent of Police, wherein an account is given of cures obtained by liquor ammoniæ, used both topically and internally, in cases of bites from serpents, such as the Foorza, Ghonus, &c. &c. The remedy is highly spoken of and with it the patients are generally roused from the deep stupor in which the influence of the venom had thrown them. The topical applications seem to stimulate the part, and allay inflammation and irritation. The account is, however medically speaking, very unsatisfactory; but the facts should certainly be borne in mind.

Correspondence.

"Audi alteram partem."

TREATMENT OF SEWAGE.

To the Editor of THE LANCET.

SIR,—In making experiments upon sewage, &c., I found that if it were mixed with sulphate of iron and alum, it lost its unpleasant smell. A solution, containing an ounce of each to a gallon of water, was found strong enough to answer the purpose.

Lime, mixed with five, ten, or twenty parts of sand or earth, and well watered with a solution of alum and sulphate of iron, formed a deodorizing mortar well adapted for filling up vaults, pools, and drains, which expanded in drying, and completely stopped up the cavities, with a substance having an affinity for the products of decomposition.

If half a ton of alum and sulphate of iron, dissolved in water, were thrown into the Thames, once in twenty-four hours, above Vauxhall bridge and below London bridge, and if four or six machines for evolving chlorine gas, and conducting it into the water, when the tide flowed, were placed on each side of the river, such means would render the river sweet, and nothing poisonous or injurious to health would result from the proceeding. Urinals, closets, and privies become free from smell in a short time by pouring the solution over and down them.

A firm deodorizing bottom may be made in the Serpentine by levelling and covering it with a layer of gravel, sand, lime, and sulphate of iron and alum. Of course, all sewage and dirty water should be prevented from entering it.

The floating and suspended impurities of sewage should be removed, and be converted into English guano, before the more fluid parts are allowed to enter into any stream or river, which may be accomplished by using large reservoirs and sluices. No deodorants can be effective for any length of time where sewage precipitates are allowed to collect, as in the river Thames.

Disinfectants may be divided into two classes: first, those that act through the medium of the atmosphere upon the gases and smells already given off, as chlorine, sulphurous acid, &c.; secondly, those that act upon the decomposing body, destroying its structure, and preventing any further fermentation or decomposition, as strong acids, sulphate of iron, chloride of protoxide of iron, zinc and alum, &c.

Sewage and organic matter, coming in contact with sulphate of iron, is decomposed; iron pyrites, carbonate of iron, protoxide of iron, and sulphate of ammonia are formed. The precipitate is covered with protoxide of iron and pyrites, which excludes the oxygen of the air or water, and stops decomposition until all the iron oxide is converted into a peroxide.

Alum coagulates soluble animal matter, which falls to the bottom in the form of a white flocculent powder, and when decomposed covers the precipitate with another covering of clay, thus still more effectually excluding the influence of oxygen, heat, and moisture upon the putrid mass.

The principles of treating sewage are,—1st, Remove all the floating and suspended impurities. 2nd, Apply deodorants to act upon and precipitate the soluble animal matter, &c.; as sulphate of iron and alum. 3rd. Decompose the gases and smells with chlorine, &c., and lime.

Sewage is alkaline, and when acidulated with sul phuric acid decomposition and fermenation are stopped, effervescence takes place, and sulphuretted hydrogen and carbonic acid gas are given off, which greatly increases the smell for a time; but as soon as those gases have had time to escape, the smell is much lessened. Alum or burnt clay is then added to the fluid first poured off the precipitate, which coagulates the soluble compounds; and, lastly, the water is treated with lime before it is allowed to escape into the brooks and rivers; the carbonic acid of the atmosphere removes the lime from the water, and confervæ appear, which complete the further purification by consuming the remaining organic matter, and leaving nothing but pure water containing salts of potash, soda, &c.

I am, Sir, yours obediently,
Henry Bird, F.R.C.S. &c.

Cheltenham, May, 1860.

P.S. The following is a list of common deodorants:—1, Burnett's chloride of zinc; 2, permanganate of potash; 3, protochloride of iron; 4, sulphate of protoxide of iron; 5, sulphate of alum; 6, sulphate of alum and sulphate of iron; 7, sulphate of iron and common salt. These all appeared to act in nearly the same manner upon sewage, and sulphate of iron and alum seemed to be the most efficient. When the smallest quantity of chlorine was added to either of these solutions the smell immediately disappeared. As no danger of poisoning can accrue from using even a strong solution of sulphate of iron and alum, and as it acts as well as, if not better than, the other deodorizers, it ought to be adopted in preference to lime, zinc, and all others; besides being the cheapest of all.

PIROGOFF'S OPERATION.

(LETTER FROM DR. EBEN WATSON.)

To the Editor of The Lancet.

Sir,—After some unavoidable delay, I have to day obtained a copy of Prof. Pirrie's "Principles and Practice of Surgery," on which you say your remarks regarding the performance of Pirogoff's operation without disarticulating at the ankle were founded;* and on referring to it, I find that *the name* of the Russian surgeon does *not once occur* in the whole of that work! Why, Sir, Prof. Pirrie's book was published more than a year prior to the date of the paper in which Pirogoff first described his operation. How, then, could Prof. Pirrie modify an operation which had never been proposed?

I have indeed to-day, *for the first time*, discovered that Prof. Pirrie has recommended *Syme's operation* to be performed without disarticulating the foot. I think this anything but an improvement of that operation. If, however, I had known of it before I wrote my paper for your journal, I should have referred to it then. But with his modification of Syme's operation I have nothing whatever to do at present; for surely his having suggested such a modification of *Syme's* operation does not give him any right to claim *my* modification of *Pirogoff's*. Besides, you surely have no right to say that his practice of not disarticulating "was understood by the profession to apply to *either* Syme's or Pirogoff's operation;" for you "founded your remarks on Prof. Pirrie's 'Principles and Practice of Surgery,'" and in that work, as I have already stated, the name of Pirogoff does not occur, and of course there is no mention of his operation. How, then, in the name of wonder, could the profession divine that Prof. Pirrie's modification of Syme's operation was applied by him also to Pirogoff's? Has Prof. Pirrie ever published one word about Pirogoff's operation? Not one that I can discover, or, I may add, that you yourself, with your greater erudition, can call to memory; for you confess that you have solely founded your remarks on Prof. Pirrie's "Principles and Practice of Surgery," a work which was published before perhaps Pirogoff had even conceived the idea of his operation.

As little ground had you for stating, in a former number, that Prof Pirrie had "*set forth the advantages*" of Pirogoff's operation; for the fact turns out to be that he has never *written* at all on that operation; and if he has *performed* it, of which I have some doubt, he certainly has left it entirely to others to "set forth its advantages." Even if the doubt I have just expressed be unfounded, and if it be true that Prof. Pirrie has performed Pirogoff's operation in the precise manner which I have proposed in my Clinical Lecture published in June, 1859, still, as it is now quite clear that he did not make his practice public in any way whatever, he cannot *now*, or rather. you cannot in his name, with the slightest show of reason or justice, rob me of whatever credit is due to the original proposal of the modification of Pirogoff's operation referred to in the above remarks.

Had you been able to prove that I had been anticipated by Prof. Pirrie in making this proposal, I should now have withdrawn my claim to being its author, and done justice to his; but as you have failed to do so, I rather feel that I am in a position to ask you to confess your error, and give me credit for the improvement, as others have already done.

I am, Sir, your obedient servant,
Eben Watson, M.D.

Glasgow, 1860.

⁂ So far as the evidence goes, Dr. Watson appears to be the first surgeon who has *written* upon Pirogoff's operation *without disarticulation*, and Professor Pirrie's remarks in his "Principles and Practice of Surgery" clearly apply to Syme's amputation. However, our desire at all times is to give credit to whom credit is due; and if we have unintentionally committed an error, we gladly rectify it. At the same time, it is possible that Professor Pirrie was the first to perform Pirogoff's operation after the manner of his modification of Syme's. There is one name that especially deserves to be mentioned in connexion with this subject, we mean the late M. Baudens, the eminent military surgeon. His labors in this respect have been too much overlooked.—Ed. L.

To the Editor of The Lancet.

Sir,—I think the following statement will show how far Dr. E. Watson is entitled to be regarded as the original discoverer of the method of performing Pirogoff's amputation at the ankle-joint without disarticulation:—

1st. I attended Professor Pirrie's surgical course, delivered during the winter sessions 1855–6, and 1856–7, and again and again saw him perform on the dead subject Pirogoff's amputation, without disarticulation. The operation was known familiarly amongst the students by the alliterative title of "Pirrie's modification of Pirogoff's amputation." On one occasion previous to performing the operation on both lower extremities of a subject, the Professor requested the class to time him, and the whole of the steps were gone through with great neatness in less than half a minute for each foot, thus proving how expeditiously it might be accomplished *by omitting the process of disarticulation.* I now speak of 1855; but I understood that he had performed the operation during a previous session or sessions, so that Dr. Watson *was anticipated by years,* he having adopted the modification January 4th, 1859, or thereabouts; for he appears to have disarticulated in the case of the boy M'G., August, 1858.

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* July No., p. 92.

2nd. At a certain point Pirogoff's operation is identical, or all but identical, with Syme's. Each proposes disarticulation previous to sawing off the malleoli. Professor Pirrie, as stated, has shown the great advantage of performing these operations without disarticulation. Here are there respective directions:—

Pirogoff, after describing the mode of disarticulating, says—"I separate the short anterior flap from the two malleoli, and saw through them at the same time close to their base. I turn this flap forwards, and bring the cut surface of the os calcis in apposition with the articular surface of the tibia. If the latter be diseased, it is sometimes necessary also to saw off from it a thin slice with the malleoli."—(Mr. S. Wells' translation.)

Syme.—"The foot should be disarticulated before the malleolar projections are removed, which it is always proper to do, and which may be most easily effected by passing a knife around the exposed extremities of the bones, and then sawing off a slice of the tibia connecting the two processes."

Pierrie.—"*Instead of disarticulating* the foot, and then sawing off the malleolar processes and a thin slice of the tibia connecting them with each other, I have, after making a clearance for the saw by sending the knife round the bones, sawn off the malleolar processes and a very thin slice of the tibia, *without effecting disarticulation.*"—(Pirrie's Principles and Practice of Surgery, p. 754. Churchill, 1852.)

I am astonished that Dr. Watson has so lately become acquainted with Professor Pirrie's book, since it is well known in England and Scotland, as well as in America, where it has been ably edited and republished. Hundreds of pupils have passed through Professor Pirrie's classes during the last eight years, and become well acquainted with his modes of operating; hence the great justice of the remark to which Dr. Watson so especially objects—namely "His practice in this respect has been known to the profession for many years, and understood to apply to either operation."

Dr. Watson attempts to depreciate Professor Pirrie's modification as applied to Syme's operation; he regards it as "anything but an improvement." This is rather ungenerous. It has the same merits in the two operations. It saves time; it enables the surgeon to escape what sometimes proves a serious difficulty.

I am, Sir, yours respectfully,
Robt. Martin, M.D.

Warrington, 1860.

(letter from prof. pirrie.)

To the Editor of The Lancet.

Sir,—The readers of The Lancet are aware that a difference of opinion has been expressed as to who first proposed to modify Pirogoff's operation so as to effect amputation without disarticulation of the foot. Although I have no taste for discussions as to whom belongs the merit of priority of recommending modifications of surgical operations when these discussions are entirely of a personal character, and can in no way lead to the advancement of surgery, yet the manner in which Dr. Eben Watson of Glasgow has brought my name before the profession in his letter of your impression, induces me to solicit the publication of this communication.

In the letter above referred to, Dr. Watson says: "I have indeed to-day, *for the first time,* discovered that Prof. Pirrie has recommended *Syme's operation* to be performed without disarticulating the foot. I think this anything but an improvement of that operation." Since 1839 I have always performed Syme's operation without disarticulating the foot. In the operation of that truly great surgeon, and in my slight modification of it, the incisions, the section of the bones, and the results are precisely the same; both the operations can be performed with equal ease and elegance; and the only difference in the two proceedings is, that Syme disarticulates the foot and then saws off the end of the bones, whereas I prefer shortening the proceeding by sawing through the bones, in precisely the same situation, without disarticulating the foot. In these circumstances I fail to see force in Dr. Watson's words when he says, "I think this anything but an improvement of that operation."

Dr. Watson, addressing you, says regarding myself, "Surely his having suggested such a modification of *Syme's* operation does not give him any right to claim *my* modification of Pirogoff's. Besides, you surely have no right to say that his practice of not disarticulating 'was understood by the profession to apply to *either* Syme's or Pirogoff's operation;' for you founded your remarks on Prof. Pirrie's 'Principles and Practice of Surgery,' and in that work, as I have already stated, the name of Pirogoff does not occur, and of course there is no mention of his operation. How, then, in the name of wonder, could the profession divine that Prof. Pirrie's modification of Syme's operation was applied by him also to Pirogoff's? As little ground had you for stating, in a former number, that Prof. Pirrie had *set forth the advantages* of Pirogoff's operation; for the fact turns out to be, he has never *written* at all on that operation; and if he has performed it, of which I have some doubt, he certainly has left it entirely to others to 'set forth its advantages.' Even if the doubt I have just expressed be unfounded, and if it be true that Prof. Pirrie has performed Pirogoff's operation in the precise manner which I have proposed in my Clinical Lecture published in June, 1859, still, as it is now quite clear that he did not make his practice public in any way whatever, he cannot *now,* or rather you cannot, in his name, with the slightest show of reason or justice, rob me of whatever credit is due to the original proposal of the modification of Pirogoff's operation referred to in the above remarks."

Seeing Dr. Watson has thus expressed himself, it appears to me necessary that I should now, in justice to others and to myself, state what my teaching and proceedings have been, regarding the performance of Pirogoff's operation without disarticulation of the foot. While perusing the description of Pirogoff's operation within a week after its publication in this country, the idea at once and naturally occurred to me that the operation would be greatly simplified and improved by applying to it the modification I had previously adopted in Syme's amputation. I felt greatly interested in the subject, and, after due consideration, resolved to recommend and adopt the following procedure, which seems to me to make this amputation one of the most simple operations any surgeon can be called upon to perform.

The patient being laid on a table, and the surgeon —whichever foot be the subject of operation—being placed on the left side of his patient, with the heel, in the first step of the operation directed towards himself, and having with the left hand taken hold of the soft parts, and drawn them a little backwards, so as to secure greater breadth of flap, inserts the knife on one side in front of the malleolus, carries it down across the sole of the foot, and upwards to the corresponding point just at the front and upper part of the other malleolus, taking care to direct the incision so as to pass opposite to the part where the posterior portion of the astragalus rests upon the calcaneum, and to use the knife energetically, so as to cut through all tissues down to the bones. By this single movement of the knife, a clearance is made for the saw, by a few movements of which the portion of calcaneum behind the astragalus is speedily cut off from the rest of the bone, the section being from below upwards and a little backwards, so that the portion remaining in the flap will be a little longer from behind forwards—below than above. The assistant having slightly changed the position of the leg, so as to make its posterior part to rest upon the table, the surgeon, by a second movement of the knife, unites the extremities of the first incision by a slightly semilunar incision, using the knife boldly, so as to cut through every tissue in front of the bones, and then, by a few slight touches below, admits of the flap being brought back, and makes a clearance for the saw. By a few movements of the saw, the bones are cut through immediatly above the ankle, and this extremely simple amputation is completed by little more than two movements of the knife, and two sets of movements of the saw.

During the second week after the publication of Pirogoff's amputation, the operation as now described was demonstrated by me on the dead body to a large number of medical students; in each winter session since that publication, it has been performed on the dead body in presence of a very numerously attended surgical class in this University: and it was performed by me on the living body in the Royal Infirmary, in the first suitable case for the operation, about seven months ago. During two of the winter sessions referred to, Dr. Martin was one of the most enthusiastic students of surgery that ever listened to my lectures, and took a great interest in this operation, which, amongst the students at this University, was known by the name of "Pirrie's modification of Pirogoff's operation." Dr. Martin and many other gentlemen now practising our profession are able to bear testimony on this subject, as one within their own personal knowledge and observation.

I could not have mentioned Pirogoff's operation in the edition of my "Principles and Practice of Surgery" now out of print, as that work was published prior to the date of the publication of the paper in which Pirogoff describes his operation; but it is fully entered into in the edition of that work now going through the press; and I would willingly have rested perfectly satisfied wich my public teaching as a means of diffusing knowledge of my views respecting this operation until the publishing of the new edition of my work, had not Dr. Watson expressed himself as he has done regarding the gentlemen who have written on the subject in THE LANCET, as well as regarding myself.

I am, Sir, your obedient servant,
WILLIAM PIRRIE, M.D. Edin.,
Regius Professor of Surgery.
Aberdeen, May, 1860.

⁂ This letter satisfactorily proves that the merit of having been the first to conceive the performance of Pirogoff's operation *without disarticulation* is due to Prof. Pirrie. Our statement that Prof. Pirrie's practice in regard to his mode of performing Syme's and Pirogoff's operations has been known to the profession for some years is therefore confirmed. We cannot insert any further correspondence on the subject. —ED. L.

FRENCH HOSPITAL STUDY.

To the Editor of THE LANCET.

SIR,—The interesting remarks of your Parisian correspondent, on the subject of French Hospital Study (*ante*, page 187), deserve the best attention of all who propose taking a "finisher" abroad. The advantages of a residence at any of the great continental schools are so often marred by inexperience and want of due arrangement of time, that the student not unfrequently finds the true benefit of his stay to coincide pretty exactly with the conclusion of his visit. Following, then, in the footsteps of "our own correspondent," permit another "old hand" to add a few notes to what has been already so well begun.

In the first place, let me caution the student against attempting too much. In Paris the facilities for improvement are so extensive that it is, perhaps, a little puzzling sometimes to know what to select; but, doubtless, after a day or two with each of its principal professors, it will not be difficult for each man to select the teacher most after his own heart. If, however, instead of doing this, he has a different hospital for every day in the week, and a constant change of lectures and clinical demonstrations, he will conclude his season with the reflection that he has frittered away his time and secured for his trouble nothing better than dim recollections and half-digested facts.

The hospitals in Paris which are above all others deserving of his attention, are those devoted to affections of special organs—as diseases of the skin, venereal complaints, and children's disorders, can there be studied on a vast and unrivalled scale. But the value of such study is very much enhanced by the *cours particuliers*, conducted by the "internes," at rates varying from thirty to fifty francs per month. By means of these excellent private classes, the student is afforded the best opportunity of thoroughly examining each variety of the disease; its leading features are pointed out and explained, and, in course of time, he is himself compelled to deliver his diagnosis on every case. Let him not, then, neglect to attend one or more of such courses, for, in addition to their professional value, the advantages in the way of French conversation which they afford are by no means to be despised.

Of course, on first arriving in Paris, a good deal of hospital attendance is lost from the difficulty that every fresh ear experiences in understanding French. But let him not despair; let him work away bravely, casting aside all English books, and taking every opportunity of familiarizing his ear with the unwonted sounds by a steady attendance upon the lectures of the Faculty of Medicine. And he will find that, by boarding in an English family, his ear is apt to lose ground, and, by hearing much of the old familiar language, to fall back in its appreciation of the peculiar French twang. When to this I add that the regular hours for meals will often prove very inconvenient, by breaking in upon hours of study, and that the opportunity of seeing character which cafés and restaurants so well afford will thus be lost, no one will be inclined to doubt that lodging is best adapted for Paris life.

I am, Sir, your obedient servant,
INVESTIGATOR.

THE LARYNGOSCOPE.

To the Editor of THE LANCET.

SIR,—As it would appear, from some recently published notices in THE LANCET of the laryngoscope, that Dr. Johann Czermak, of Pesth, claims to be its original inventor, we think it our duty to state that so long as fourteen years ago, we made an instrument on exactly the same principle for the late Mr. Avery, of Charing-cross Hospital.

This instrument, as well as the lamp and other speculæ invented by Mr. Avery, were exhibited by us in 1851; and we beg to subjoin the extract from the Exhibition Catalogue, vol. i., p. 478.

We are, Sir, your obedient servants,
JOHN WEISS & SON.

Strand, June, 1860.

(*Extract.*)

"Avery's lamp and reflector for examining the ear, throat, and different canals of the body."

◆

CAN A WOMAN REMAIN IGNORANT OF HER PREGNANCY UP TO THE TIME OF HER DELIVERY?

To the Editor of THE LANCET.

SIR,—The following case I can vouch for as decisively affirmative upon the above medico-legal point:—

On the 24th ultimo I was summoned to Mrs. R——, aged twenty-eight, married, with one child four years old. She stated that for the last twelvemonths she had been ailing, and considered to be in a consumption; that a month or two before last Christmas she began to vomit blood, and, continuing to do so, she in March last consulted Dr. Tyler Smith, who, to her great surprise, pronounced her to be seven months pregnant. Up to the time of her labour the catamenia had been quite regular; she had suffered from none of the ordinary sympathetic ailments; had been sensible of no alteration in the breasts; and, notwithstanding Dr. Tyler Smith's opinion, she had not been able to detect any enlargement of her abdomen, or any sensation whatever of the child's movements. Had she not been informed of her pregnancy, she would undoubtedly have remained ignorant of her situation to the very last.

The liquor amnii was abundant, and the child a full-grown lively boy.

I am, Sir, yours, &c.,
JAMES DUNCAN, M.B.

Henrietta-street, Covent-Garden,
July 12th, 1860.

We have known similar cases in which married women, who had previously borne children, did not believe they were pregnant until delivery was at hand.—ED. L.

◆

TRANSMISSION OF SECONDARY SYPHILIS.

To the Editor of THE LANCET.

SIR,—The reviewer of Mr. Harrison's book on Venereal Diseases* mentions the author's opinions respecting the transmission of secondary syphilis. Mr. Harrison thinks that this disease, which is supposed to be directly conveyed from the male to the female, does, in reality, reach the latter very seldom otherwise than by the intermediate action of the fœtus contaminated by the father.

I am certainly extremely happy to be supported by Mr. Harrison's authority, but I must beg to observe that not only have I long ago expressed this opinion, but also based it upon the very arguments which Mr. Harrison brings forward. The author, for instance, says—

1st. That in most of the cases of ascertained secondary transmission the disease has been conveyed from the male to the female, and not from the female to the male.

2ndly. That in such cases the first symptoms which are observed upon the woman appear in regions which leave no room for suspecting infection by coïtus or any other contact.

3rdly. That the female then presents neither primary chancre nor bubo.

I repeat that I am very glad to see my arguments sanctioned by the approbation of the learned author, who doubtless has clinically verified their value. But I must remind your readers that these arguments have been put forward by myself, pretty well in the same words as used by Mr. Harrison, in my work entitled "On the New Doctrines of Syphilis," (Paris, 1858.)
P. DIDAY.

Lyons, 1860.

◆

FRACTURE OF THE LOWER JAW.

To the Editor of THE LANCET.

SIR,—The importance of the mode of treatment so ably carried out by Mr. James Salter, of Guy's Hospital, as reported in THE LANCET, (*ante*, p. 137), for the reduction of impacted fractures of the alveolar arch of the superior maxilla, is well worthy of the careful attention, not only of surgeon-dentists, but general surgeons. The application of such a principle to fractures, is a large extension of the plan of regulating misplaced teeth by elastic metallic pressure, which has been so long in successful operation. At the latter part of Mr. Salter's excellent paper, reference is made, not only to the much greater difficulty of applying mechanical contrivances to the fractured inferior maxilla, but there is a point which is a far more serious undertaking—viz., maintenance of the apparatus *in situ* comfortably to the patient, until the uniting lymph is firm enough to resist the traction of numerous antagonistic muscles.

The subjoined abridged account of a case, read by Mr. James R. Lane to the Western Medical Society, and slightly noticed in the journals of the date, of a compound comminuted fracture of the lower jaw, prior to that reported by Mr. Salter, in which the wearing of a metallic socket, fitting the teeth and gums, was not sufficient to maintain the broken ends in exact juxtaposition, on account of the obliquity of the fracture and antagonism of the muscles, perhaps may prove of value to surgery at some future period:—

John S——, aged thirty-two, was admitted into St. Mary's Hospital, under the care of Mr. James Lane, September, 1858. He had sustained several injuries about the head and neck by a fall from a cart, the wheel of which passed over his head, and fractured the lower jaw at the left of the symphysis, between the central and lateral incisors, obliquely downwards and outwards. The left portion was depressed about three quarters of an inch, and overlapped by the right. A large spiculum of bone on the right side, including two teeth, was also loose; but the fracture here did not extend to the lower margin. After the failure of all the contrivances, including Lonsdale's apparatus, Mr. James Lane, hoping to modify Lonsdale's splint, called my attention to it, as the setting of the fracture could not be maintained by any of the apparatuses. With the assistance of others the fracture was reduced, and retained *in situ* long enough to take a model in beeswax. A silver plate was made to cap and fit the teeth and the gums before and behind them for a short distance; but I found that this did not keep the fractured ends in accurate apposition, as the spasmodic action of the muscle of the left side of the maxilla gradually jerked up the plate, though it fitted accurately. To meet this difficulty, I soldered to the upper surface of the plate, at each side, a doubly-curved silver rod, each of which projected out of his mouth at the angles, and was tied to a light gutta-percha splint beneath the chin. This placed him in a comparative state of comfort, immediately enabling him to feed himself and articulate without pain.

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* July No., p. 85.

At the fourth week the splint was removed and the silver rods were cut off. The following week he left the hospital, with the plate in; the "bite" was perfectly accurate, and the position was well maintained by the temporary callus.

I accidentally saw him a few months afterwards; he had worn the plate for two or three weeks immediately on leaving the hospital, and subsequent to that only at night. The line of fracture was not detectable; but one of the teeth, where the suppuration of the periosteum had been most extensive, had necrosed and required removal.

I am, Sir, your obedient servant,
H. Howard Hayward, M.R.C.S.
Queen Anne-street, July, 1860.

A SANITARIUM AT HONG-KONG.

(LETTER FROM DR. M'GRIGOR CROFT.)

To the Editor of The Lancet.

Sir,—An article in your journal lately remarking on the decision of the Secretary of the State for War for the organization of a sanitarium and invalid establishment at the Cape of Good Hope for sick and disabled troops from China, induces me to ask permission for the insertion of a few suggestions relative to a temporary building of the same class at Hong-Kong.

This island, now a British dependency, is well known to all readers interested in China. I need not describe it, further than that it is mountainous and barren. Victoria, the seat of Government, is situated at the base of a steep rock. The highest point, called Victoria Peak, is 1200 feet above the level of the sea. The town is shut in from the fresh summer breezes of the south-west monsoon, the heat being therefore intolerable; to use a descriptive expression, it is compared to a "furnace by day," cooling towards the morning, when the early sun brings back the original temperature. Chuc-Choo and Siwan, two outposts, used to be garrisoned by troops; both spots were notoriously unhealthy.

During several years' residence, I observed that many of my military friends enjoyed remarkably good health, particularly General Jervois, Commander-in-chief. Morning or evening walks were invariably taken by most of these officers, and a favorite "constitutional" was by ascending a circuitous path at the rear of the town to the "Gap" or "steamer look-out," halting on the table-land (a view from this elevation being grand). An easy incline from this for two miles enables them to reach the pretty village and harbor of Aberdeen, a Chinese fishing station on the sea-side; and by continuing westward, a healthy walk of between four or five miles brought them back to Victoria.

Frequently, when my arduous duties permitted, did I accept an invitation to join the pedestrians; and on arrival at the "Gap," the sensation of relief from the "oven below" was beyond imagination. The fresh, invigorating breeze from the sea enabled us to return with a keen appetite.

Now I have reason to believe that about this veritable "Gap" invalid soldiers would feel the benefit of this invigorating air. The ground towards Aberdeen is an undulating slope, and in my opinion a valuable spot as a summer sanitarium. Water, cold, sparkling, and bright, is abundant. It is a curious fact, though the Peak is only about sixty feet higher, a stream of water flows constantly from it, and in the small pools at this elevation tiny fish are observed swimming about.

I feel confident this spot could be turned to valuable account. A temporary building for the sick would test my opinion; but in the erection of such, it is well known amongst the Chinese that the excavation for a foundation leaves an unhealthy odor for some time, and unless exposed to the atmosphere and sun, would induce fever; and no Chinaman will sleep on a ground floor at Hong-Kong if he can help it.

The locality near the "Gap" would be sheltered from the north-west gales or a typhoon by a small range of hills. The soil, if I recollect rightly, is very good up there—the verdure more natural; and as vegetables would grow there easily, the invalids sent up from the magnificent but ill-placed Military General Hospital at Victoria could amuse themselves by making gardens.

In erecting a building, I have no doubt the engineer and medical departments are aware of my remarks about the soil; but free ventilation and good drainage beneath the ground-floor are indispensable.

I do not question a sea voyage being superior to my proposition, but, as a temporary means, it may save many a poor soldier leaving his bones in the "Wan-i-Chong Valley" or "Vale of Death"—the graveyard of Hong-Kong.

I could interest my readers further on this subject, and point out from experience and observation, why certain spots are unhealthy, and others, not fifty yards away, the opposite; but I must not trespass on your columns. I am, Sir, yours obediently,
J. M'Grigor Croft, M.D., M.R.C.P. Lond.
Late of H. M. Ceylon Rifles at Hong-Kong and Staff-Surgeon.
Mandarin Villa, Abbey-road, St. John's-wood, 1860.

IODIDE OF POTASSIUM IN LARGE DOSES.

To the Editor of The Lancet.

Sir,—I think the profession and the public at large are much indebted to the gentlemen who volunteer to test the powers of drugs in heroic doses upon their own persons; and the letter of Dr. Sisson in The Lancet*, detailing experiments, tried upon himself, with iodide of potassium, does credit to his courage, and entitles him to thanks for his experimental inquiry; at the same time I feel assured that larger experience will satisfy him that the salt in question ought in all cases to be prescribed with due caution. True it is that a large proportion of patients can take it, even in large doses, with impunity; but, judging from my own experience, there are many to whom it cannot be given, without inconvenience, even in small doses. I confess I was staggered on reading of the iodide having been given by our continental brethren to the extent of an ounce per diem; still, I know that some constitutions will tolerate almost any dose of powerful drugs when gradually augmented. Calomel may be given to some persons to an almost unlimited extent without producing any of its ordinary effects upon the system; whilst in another individual a single grain will excite ptyalism. Thus it is with iodide of potassium; one patient may possibly take an ounce per diem with impunity and perhaps benefit; and another will be half killed by a grain or two. I gave to a middle-aged gentleman a mixture containing iodide of potassium—a dose, containing three grains, to be taken three times a day. He took one dose at night; I saw him in the morning, when his sister informed me he had been, to use her own expression as near as I can recollect, half mad all night, and she dared not give another dose of the medicine. He was getting better, but had ferrety eyes, when I saw him. He took no more. The party had suffered from some head affection resulting in partial paralysis of the lower extremities some years before I knew him, and the iodide was prescribed for chronic enlargement of the testis. The same dose was given to another middle-aged person affected in a like manner, but otherwise healthy. He took a dose at night, and in the morning I found him in bed with his head wrapped up in a flannel night-cap; he had got a desperate cold, somehow, the day before, with which he woke up, but was getting better. He took no more iodide, and was free from his desperate cold the next day.

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* *Vide* June No. p. 545.

I gave the same dose recently to a lady, the subject of ovarian dropsy. A few doses made the head very uncomfortable, and brought out blotches on the face and other parts of the body. Its use was discontinued, and afterwards resumed with the same results.

To the daughter of the same lady, eight years old, it was given in one-grain doses. On the second day I found the patient with a shade on; she had caught cold in the eyes and could not bear the light. The iodide was discontinued, and the eyes were well in twenty-four hours.

A lady suffered from neuralgia of the face, for which the iodide had been prescribed on a former occasion—she told me in one-grain doses; it cured the neuralgia, but deprived her of voice for a long time. I doubted her report as to dose, so the prescription was looked up, and it proved to be a five-grain dose. She was anxious to try it again, if its inconveniences could be obviated. I directed a few drops of laudanum to be added to each dose, which proved effectual.

I took the iodide myself, some time back, for a rheumatic affection of the acromio-clavicular joint. The dose I began with was three grains, thrice daily. This was taken three or four days, when a grain per dose was added. Finding no inconvenience or advantage, another grain was added in a day or two. The effects of the medicine now began to show themselves. I awoke the morning after the five-grain doses had been taken with an uneasy feeling of the left eye. On applying the hand, I found the edge of the orbit, at the external part, tender on pressure, and on inspection the eyelids were found swollen and infiltrated on that side. The following morning the right side was similarly affected: the tenderness was evidently seated in the periosteum of the orbit, and exclusively at the outer part. On the following day, a strange sensation was felt: it appeared like a pain extending in a direct line from the external border of one orbit to that of the other at the same spot; the sensation was very peculiar and difficult to describe—it was pain and something more, which made me decide at once it was better to have rheumatism than that, for to-morrow perhaps, the dura mater may be quarreling with the iodide in a like manner to that manifested by the periosteum of the orbit to-day, and so I gave up my remedy.

The foregoing, amongst similar cases that might be adduced, will suffice to show that iodine is not a medicine that may be prescribed at random in heroic doses in all cases. Like opium and other medicines, iodine may be safely administered in large doses to some individuals, and with advantage; at the same time, common prudence requires that the drug should be prescribed with caution in all cases, seeing that no one can tell beforehand whether the individual for whom it is prescribed can tolerate its action or not. I have seen an ounce of the ordinary tincture of opium taken at once as an agreeable cordial, and known a half-grain dose of opium, given to an adult, followed by all the urgent symptoms of poisoning by that drug. The iodide of potassium appears to act specifically on mucous membranes, as shown by its action upon the bowels, causing much irritation in some cases, irritable bladder in others; affections of the conjunctiva, fauces, nasal cavities, and larynx, together with the integument; and also on fibrous structures, as periosteum, and capsular ligaments of joints, &c.

I am, Sir, yours, &c.,

H. C. Roods, M.D.

Berners-street, 1860.

PARTIAL DISLOCATION OF THE HIP-JOINT.

To the Editor of The Lancet.

Sir,—Having noticed that one of your contributors has published in your journal some account of obscure injuries of the hip-joint and adjacent parts, I think it may be well to forward you a short statement of a case that has just occurred in my practice, and which I consider an injury not described, at least it is not to my knowledge, and which I cannot believe to be anything else than an imperfect dislocation of the hip-joint.

On the 29th of May, 1860, I was requested to see a young woman, whose male associate had violently kicked her over the right hip, both the parties being more or less intoxicated at the time. This had taken place about twelve hours before my seeing her. She was on her back, unable to move, crying out, on the limb being touched, in a manner, to a practised ear, significant of a very grave injury. The position was just that of a dislocation on the dorsum ilii, but, if I may use the expression, more subdued in its outlines. I manipulated by extension and rotation, but with comparatively very little force relatively to what is required in regular dislocation, and suddenly the parts resumed their natural positions; all the movements could be performed both actively and passively, and the pain almost entirely ceased. I left the case with some doubt on my mind as to its nature, and merely ordered a few leeches and a liniment.

The next day, I was again summoned, the statement being, that in turning over in the night she had *got it wrong again;* and indeed I found her precisely in the condition described as existing on my first visit. I immediately performed the same manipulations, and with a snap distinctly audible to all the people in the room, and which was so loud that it might have been heard in an adjoining one, the parts were restored to position and use. I bandaged the hips and pelvis, being more careful in my directions as to position and quietude, and in about a week she was able to walk, and very soon recovered perfectly.

I cannot believe this to have been anything but a partial dislocation of the hip-joint. Whether such a case has been described, I am not aware, and merely furnish it as being new and singular to me, and only wishing it to pass *quantum valeat*.

I am, Sir, your obedient servant,
E. D. L. Gillott, M.R.C.S.
Sheffield, July, 1860.

MORBUS ADDISONII

To the Editor of The Lancet.

Sir,—The following case, I think, should be recorded:—

On the 13th ultimo I was asked to visit a gentleman, single, aged thirty-one, living at Edenbridge, supposed to be suffering from dyspepsia and extreme debility of some three or four years' standing. I placed him in a chair before a good light, stripped him, and examined him very carefully. The brain, heart, lungs, liver, and kidneys afforded no evidence of any disease; I saw the urine, which was healthy, and also the stools, which were of proper bulk, color, and consistence; there was slight epigastric tenderness, and irritability of stomach: the heart's action was feeble, and the pulse very soft and compressible. The body was somewhat emaciated, but not remarkably so, as we find it in phthisis or malignant disease; indeed, there was evidently a fair amount of subintegumental and interstitial fat, and the skin seemed healthy to the touch. The eyes were pearly white, and emaciation was more obvious in the face than elsewhere. The color of the skin was most peculiar, and such as I had never before observed; it had what is termed a "walnut juice" tint, which was most decided about the forehead, face, neck, axilla, bends of the arms, and umbilicus. The patient complained of excessive weakness, and could scarcely stand or move. This weakness, with loss of appetite and occasional sickness, had existed, more or less, for three or four years; but the discoloration of the skin was more recent, and had come on gradually. I could not discover anything like a definite beginning, or root, or cause of the malady; the very distressing asthenia, the characteristic tinge of the skin, and the irritability of the stomach, were the salient features of the case, and these, coupled with the total absence of any disease in the vital organs, induced me to give a very decided diagnosis and prognosis. I stated, unhesitatingly, that it was a case of Morbus Addisonii, and that the patient would die, perhaps rather suddenly. Three days afterwards, he died; but as I did not hear of his death till some days after its occurrence, there was no chance of a post-mortem examination. I have not the least doubt, however, that I should have found disorganization of the suprarenal bodies.

Dr. Barlow saw the case on the 14th June, and gave the very same diagnosis and prognosis as I gave on the 13th.

I am, Sir, yours very truly,
Daniel Hooper, B.A. & M.B. Lond.
Trinity square, Southwark, August, 1860.

THE QUESTION OF TITLES.

To the Editor of The Lancet.

A person holding a diploma from a legally constituted College or Faculty of Medicine, empowered to confer the privilege of teaching (*docendi*) medicine, must be a teacher or doctor, the title of "doctor" necessarily flowed from the privilege *docendi*; consequently the diploma of a physician includes a doctorate, although it be not a degree. Graduates in medicine assert, and I believe correctly, that their privilege of practising (*exercendi*) medicine constitutes them *bonâ fide* physicians, and gives them a right to this title and rank. Now, to use an *argumentum ad hominem*, if the privilege of practising medicine constitutes the graduate a physician, on what principle in logic or equity can he deny that the corresponding privilege of teaching medicine constitutes the physician a doctor? Let, then, graduates know that they are in precisely the same predicament with regard to the title of "physician" that physicians are with respect to the title of "doctor;" that they are only physicians in the same way that physicians are doctors, and they may perhaps be not so ready to deny to the physician a title accorded to him for centuries by the highest authorities.

I am, Sir, your obedient servant,
J. G. Parsons, L.R.C.P. Ed., F.R.C.S.
Bristol, July, 1860.

DISCHARGE OF CARBONACEOUS MATTER FROM THE NARES, ETC.

To the Editor of The Lancet.

Sir,—In 1859,* you did me the honor to publish a few observations "On Two Cases of Unusual Discharge of Carbonaceous Matter from the Nares and Intestines," occurring, in each instance, in the person of married women.

I was in hopes that the publication of these remarkable cases might have invited some of your readers to suggest an explanation of phenomena so unusual; but in this hope I have been disappointed. Under the head of "Foreign Department," in your journal, you have published some observations of a case which naturally arrested my attention, as affording the nearest approximation to my own that has yet come under my notice. I shall be excused, perhaps, if I give a condensed version of the account:—

A young lady, aged nineteen, after having been rather painfully excited, noticed black stains on her eyelids. Towards the end of last year, M. Hardy, Physician to the St. Louis Hospital, found her in the following state:—"Cutaneous aspect of upper and lower lids, on both sides, covered with a greyish-black layer, which, examined closely, looked like *coal-dust*. By passing a piece of linen moistened with oil on the lids, a dark spot like lamp-black was left on the linen. After this cleansing process, the eyelids looked normal, even when examined with the magnifying glass. Two hours afterwards the lids were black again. All kinds of applications used to prevent this secretion have successively failed. Some members of the Medical Society of the Hospitals of Paris (before whom the case was brought) thought there might have been some deception in these cases."

In an earlier part of the details it is recorded that "this peculiar complaint, although hardly known in other parts of France, has been observed seven or eight times at Brest, always upon women, belonging to various ranks of society."

In my own case, while there was no possible motive for deception, I had the surest guarantee of the existence of what I described, in my personal observation of the sooty or carbonaceous discharge from the nostril, renewed over and over again, after being cleansed away from the part before my eyes.

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* *Vide* December No.—page 521.

I remain, Sir, your obedient servant,
M. Broke Gallwey.
Woolwich, 1860. Surgeon-Major, Royal Artillery.

ARSENIC EATING.

To the Editor of The Lancet.

Sir,—The subject of "arsenic-eating" being revived in your journal, I was at first struck with the quantity of that poison taken at a time; but, on reflecting for a moment, it occurred to me that the arsenic being taken in coffee in a state of coarse powder, would not be so liable to dissolve or become suspended by the liquid, especially if care be observed not to stir the liquid. I knew a man who procured half an ounce of white arsenic in fine powder, put it into a pint of porter, and then drank off the liquid, leaving only the dregs, which he threw away. Now, it might be said that half an ounce of arsenic was taken, or a greater portion of it; but such was not the case, for when it is thrown into a liquid it falls to the bottom like a lump of lead, leaving only a few particles suspended, but sufficient in this instance to produce alarming symptoms, requiring medical treatment. The man, however, survived, though paralysis followed. In this case I knew the arsenic to have been unadulterated; but had the poison been in *coarse*, instead of *fine* powder, I am of opinion that no serious symptoms would have followed. It is possible that an arsenic-eater is cautioned not to stir the coffee after introducing the arsenic; at least we may infer that there is some particular motive for using it in *coarse* powder; and until we know that the poison is actually dissolved by the coffee, we are not bound to believe that the quantity specified is taken.

I am, Sir, your obedient servant,
Henry Osborn, M.R.C.P. Lond.
Southampton, Aug., 1860.

HYPODERMIC INJECTION OF MORPHIA.

To the Editor of The Lancet.

Sir,—May I beg for space for a few lines, to warn those of your readers who have not yet tried the hypodermic injection of morphia, against its indiscriminate or incautious use?

Moved thereto by the enthusiastic admiration of some friends, I purchased one of Coxeter's syringes, and made my first trial on a lady who has suffered very severely from neuralgia under the left breast, shooting down the left arm, unconnected with any heart disease. She is unable to take opium in any form by the mouth. She had had no sleep for two nights in consequence of this pain. I injected, first, three minims of a solution containing five grains of acetate of morphia to the fluid drachm No immediate effect was produced, but during the night she had not a moment's sleep; she had a most unpleasant itching of the face, and severe headache. Thinking that perhaps I had not used enough, I doubled the strength of the solution the next night, but only with the effect of increasing the unpleasant symptoms. The infra-mammary neuralgia was quite unrelieved on both occasions.

The second case was one almost exactly similar, but the symptoms produced by the injection were much more severe. The patient is subject to epilepsy, and one of her fists followed the injection, whether *post* or *propter* I cannot say. She was delirious all night—not a moment's sleep; intolerable headache, with injected conjunctivæ, in the morning. The neuralgia was, however, much relieved. The pupils were still (fifteen hours after the operation) contracted.

In both cases the injection was applied to the seat of pain.

I think it right to put these cases upon record, as it is only fair that the profession should hear of the unsuccessful as well as the successful ones. I shall try the plan again, but not on any delicate persons of either sex.

I am, Sir, your obedient servant,
R. H. Bakewell, M.D.
High-street, Deptford, July, 1860.

INJECTION OF ICED WATER INTO THE CAVITY OF THE UTERUS IN POST-PARTUM HÆMORRHAGE.

To the Editor of The Lancet.

Sir,—Dr. Tyler Smith, in his "Lectures on the Principles and Practice of Obstetrics," (which appeared in the The Lancet in 1846–7,) recommends the injection of iced water into the cavity of the uterus in cases of uncontrollable post-partum hæmorrhage.

I have recently had a patient, in whose instance I followed this plan with very notable success. Anticipating a severe and dangerous labour, I was prepared for every emergency; but the administration of large doses of ergot previous to the birth of the child, and the introduction of the hand into the uterine cavity after the removal of the placenta, failed to induce any contraction of the womb, and I believe I should have lost my patient if I had not stopped the flooding by acting on Dr. Tyler Smith's suggestion.

Your obedient servant,
John K. Spender, M.R.C.S.
Bath, July, 1860.

WHAT IS THE EFFECT OF URINE TAKEN AS A MEDICINE?

To the Editor of The Lancet.

Sir,—I have been attending a man affected with spasmodic stricture of the urethra, and on the evening of the 4th of this month I was from home attending on a patient, when I was sent for in a great hurry to see this man, who was at the surgery, and in great agony from not being able to void his urine.

I reached home as soon as possible, expecting to find him in great distress. He said, "I am glad to see you, Sir, but I have passed my water, and drank it off!" I confess that I was much surprised, and asked him what he meant. His reply was, "I often drink it when I am thirsty!" As he had passed urine without my assistance, I left him for about half an hour, and when I returned I was accompanied by a young friend. The man turned to us and said, "Here's your very good health, gentlemen," and to our astonishment he drank off about half a pint more urine, which he said "he liked much better when it was fresh and warm, and could drink quarts of it." He stated to us that when a child his mother was in the habit of giving him the urine which he passed at night to drink in the morning, with sugar added to it, as a remedy for some eruption of the skin.

Now, as it is the first time that I ever heard of urine being efficacious in eruptive or other diseases (except as a nostrum applied by quacks in form of lotions and injections for the eyes and ears of their patients), perhaps some of your readers may be able to solve my question, and if so they will much oblige,

Yours very obediently,

H. R. C. Litchfield.

Twickenham, July, 1860.

CAN A PHYSICIAN BE A BANKRUPT?

To the Editor of The Lancet.

Sir,—Though not a medical man, I am a constant reader of your journal, and am amply repaid for its perusal by the valuable information I receive. I am occasionally tickled by the difficulties in regard to Scotland and Scottish matters expressed by correspondents, and the letter of "Robertus," in a late impression, is an example. I cannot tell him whether a physician can be a druggist, having due regard to the laws of the degree; but I can inform him that a physician can be made a bankrupt. Every person subject to the laws of Scotland can be made a bankrupt, whether trader or non-trader. This has been the law here for some years, and I believe that a provision to the same effect is looked upon by all parties as one of the most valuable enactments in the law of bankruptcy for England, now before the House of Commons.

I am, Sir, your obedient servant,

Lawyer.

Edinburgh, July, 1860.

SWALLOWING PEBBLE STONES.

To the Editor of The Lancet.

Sir,—The following case appears to me so remarkable, as displaying the power which nature possesses in removing from the system any foreign bodies with which it may be burdened, that, with your permission, I have considered it not unworthy of occupying a small space in your valuable journal:

In the month of August of last year, Charles B——, a child of six years old, residing in this village, swallowed within the space of a few hours the enormous number of 160 pebbles, of various shapes and sizes, the largest, at a low estimate, equalling the size of a small walnut. They weighed, as ascertained after evacuation, over seven ounces. No medicine was administered, but simply by peristaltic efforts were they ejected from the bowels. Some difficulty was experienced during their passage through the anus, the child being compelled to assist himself by using his fingers. No ill effects happened at the time; but I may add that the occurrence has left behind a relaxed condition of the sphincter ani, thereby prohibiting at times the poor child from retaining his fæces.

I am, Sir, your obedient servant,

W. A. Rackham.

Isleham, Cambridgeshire, June, 1860.

WHAT IS THE SIGNIFICATION OF THE HEART'S THROB?

(LETTER FROM MR. J. MACLISE.)

To the Editor of The Lancet.

Sir,—I would, with your permission, avail myself of the pages of your valuable journal to put the above question to all those members of our profession by whom the determination of a truth in physiological science is acknowledged to be the surest foundation whereon to raise the practical superstructure which we may ascend with confidence, and from the summit of which we may take, in commanding prospect, a full and just comparison of the conditions of health and disease.

In daring, now-a-days, to state my conviction that the throb of the heart, as felt in the left pectoral region of man or animal, is due, not to the systolic action or contraction of that organ, but really to its diastolic motion or expansion, it may well be said that I should be furnished with good reasons for such belief, since the enunciation of it is in opposition to all recorded physiological opinion and the consequences thereby incurred.

When we reflect, however, that the opinions of even the highest authorities on a question of this nature cannot be otherwise, under the anatomical circumstances, than more or less speculative, according as the veiled phenomena happen to be interpreted, this should give a place in the arena of debate to any one disposed to enter. The heart, as functional within the enclosing thorax, is impossible to be demonstrated. Its motions of systole and diastole, which we infer (and reasonably) to be necessary for circulation, are performed out of view. And when, after experimental mutilation of form and mechanism, the heart is exposed, we see, instead of the free expansion and contraction which we expected to witness of such an organ, but a mere alternating spasm and relaxation of its muscular fibres, without producing any change in the capacity of its interior. Whether the heart be detached from its connexions and removed from the thorax, or still holding its natural relative position by its vascular trunks, it manifests characters in common with all muscular substance. In neither condition can we discover the organ performing that motion which would account for its throb—its measured, positive, dynamic impulse anteriorly against the left thoracic side; and, because there are anatomical facts to prove that the heart's systolic action cannot effect this beat, and hence leave us no choice but to regard it as the effect of diastole induced by some physical condition of the organ in the thorax of the living body, and only when so situated, I have no hesitation in laying before your readers the two following propositions:—

1. *The heart's throb cannot be caused by its systolic action.*
2. *The heart's throb can be caused by its diastolic motion.*

Amongst the anatomical evidences which appear to me to prove the first proposition directly, and the second indirectly, I need only mention a few, for these are sufficient.—The living heart *in situ* is enveloped by the lungs in all parts of its periphery with the exception of a portion of the right (anterior) side of the right ventricle, near its base; which portion, of greater or less area in different cases, is placed close behind the fourth, fifth, and sixth left costo-sternal cartilages. The apex of the heart is at all times, both during inspiration and expiration, covered by the left lung intervening between it and the thoracic wall. The apex, therefore, cannot strike the thoracic left side, as it is supposed to do by those who believe that the heart's throb is owing to systolic action; and, even if such a locomotion of the heart were otherwise possible, the closely investing bag of the fibro-serous pericardium, which binds the organ to the diaphragm, would be sufficient to prevent its occurrence. If, then, to any particular part of the heart, by reason of its being in close apposition with the thoracic parietes where the throb is most appreciable, that impulse can justly be assigned, it can only be that portion of the body of the right ventricle which is permanently uncovered by the left lung; and, in respect to this part, it remains to be considered whether the throb is caused by its diastolic or its systolic motion.

The physiological phenomena which, I think, should induce us to ascribe the heart's throb to diastole of the body of the right ventricle, and to this part only, must of course negative the assumption that it can be the effect of systole, or of any other of those many various and oftentimes futile causes which have been recorded.

The heart, as a hollow muscular organ, must perform its contractions, although these be vital, according to the physical law—that is to say, the larger space which the heart, while diastolically full, occupied in the thorax, must in respect to that organ be diminished when this is systolically expelling its contents from its cavities through the arterial system. The diminution of the heart by systolic contraction on the blood is answered by the dilatation of the artery as recipient of that fluid; and, conversely, the diastolic enlargement of the heart as recipient of blood must be answered by recession of the artery as conductive of the blood. This being the, so to speak, natural librative motion of the organ and its arterial vessels, it ought to appear, I think, at first sight self-evident that of the two states—viz., increase of volume or capacity, and decrease of the same—the former is the more likely to cause the pectoral impulse or throb, and as if signifying that the diastolic heart knocked at the breast for larger room, so as the more amply to receive and pass the rising venous tide.

When the heart has performed systole, all its diameters have become lessened towards a common centre, which is in its septum; and consequently it may be reasonably assumed that the external parietes of the right ventricle must tend rather to separate itself from the thoracic wall than be impelled against it, for now the blood is in efflux from the organ. On the contrary, when the heart is being set in diastole, all its diameters become increased from the same cardiac centre; and, necessarily, the wall of the right ventricle must become suddenly pressed against the front of the left thoracic wall, for now the blood is in afflux to the heart; and that its entry into the organ is *sudden*, I, for my own part, find every reason to believe. Systole, or action, is followed by diastole as quick, or reaction; and these being the only two motions of which the heart is capable, and in the performance of which, alternately without interval, through life it is engaged, the latter motion, I am persuaded, for the reasons specified, is the cause of the pectoral beat. I have found it possible to imitate it in the dead subject in this manner:—Having tied the brachio-cephalic veins as closely as possible to their origin in the superior vena cava, the free-vented nozzle of a large syringe full of size solution was inserted into the inferior vena cava close to the foramen quadratum in the diaphragm. The thorax was left, as naturally, entire; and the lungs were fully dilated through the trachea, so as to support the heart laterally and posteriorly, and to keep the right ventricle in apposition with the left costo-sternal region. On placing my hand over this region, while the syringe by a quick motion of the piston-rod suddenly injected that ventricle, I felt an impulse similar to the heart's throb. Again, in order to prove that it is to the diastolic part of this ventricle which is uncovered by the lung, and not to the systolic apex of the heart, that the throb is due, the heart circumstanced as above, was injected with wax, and this allowed time to set, when, on exposing the organ, the body of its right ventricle was found to have been flattened against the corresponding part of the thorax. This flattening I take to be indicative of the natural tendency of the diastolic motion being sternal, and therefore that it is this motion which causes the throb. With this conclusion all the other vital phenomena accord. The heart's beat and the arterial pulse are not synchronous, which necessarily they would be if the former were the effect of systole.

Trusting, Sir, that these few remarks, in answer to the question proposed, may seem to you not unworthy of serious consideration, and as calculated in some degree to enliven and circulate the maxim of Harvey, that "men should not swear such fealty to their mistress, Antiquity, as, openly and in sight of all, to deny and desert their friend, Truth,"—

I am yours obediently,
Joseph Maclise, F.R.C.S.

EXAMINATION OF ASSISTANT-SURGEONS IN THE ARMY.

The new Rules for the Examination of Assistant-Surgeons in the Army previous to Promotion are now in operation, and the following are the questions given to several of the senior assistant-surgeons on the 10th inst.:—

A.

1. What part do you assign to Temperature amongst the causes of disease? What are the chief diseases usually ascribed to (*a*) extreme heat (*b*) extreme cold, (*c*) great and sudden changes from heat to cold, and the reverse? How would you treat those several diseases?

2. State what opinions your own observations have led you to form with respect to the effects of Diet on the health of soldiers. Discuss particularly the questions of the influence of alcohol when taken in large and in moderate quantities.

3. What are the chief diseases of the heart you have had to treat since you entered the Army? What were the symptoms of those diseases: how did you treat them; and what was the result? Enter minutely into the causes of those diseases in the men under your care. What share had the military duties in their production? State precisely any means of prevention that you could recommend.

4. Describe concisely the symptoms, post-mortem appearances, causes, treatment, and complications of dysentery.

5. What do writers mean by the term "typhus of armies"? Discuss fully the questions of diagnosis and etiology connected with this term.

6. An attack of cholera occurs in a large town close to the barracks where you are stationed. The commanding officer requests you to frame such precautionary measures as can be adopted without quitting the barracks. What would be your list of recommendations?

7. You are applied to by the Engineer Department to state how much water will be required for a hospital of 500 men; it being understood that the supply must be sufficient for cooking, washing, bathing, and cleansing sewers. At the same time, a bottle of water is submitted for your opinion as to its quality. What would you reply to the first question, and how would you judge of the second point?

8. You are required to organize a field hospital for 300 men; tents only are allowed, but these you can have in any number; no sewers can be made: How

would you arrange, ventilate, and furnish the tents? How would you organize your kitchen and dispensary? And what would be your arrangements for the removal of excrementitious matters?

B.

1. Describe the operation of resection of the elbow-joint; and briefly the chief cases of injury and disease for which it is appropriate.

2. What regulations have you seen enforced for the prevention or diminution of venereal disease among soldiers? If they have been unsatisfactory, how would you improve them?

3. What are the most frequent complications that arise during an acute gonorrhœa? Name not less than five: describe them, and state the best means for their prevention and cure.

4. For what injuries in the lower extremity produced by musket-balls, and for what consequences of such injuries, would you amputate, supposing the patients to be previously healthy soldiers?

5. In cases of punctured wounds of limbs, from which blood is no longer flowing, what would lead you to believe that a principal artery is wounded? In such belief what would you do?

6. Write the articles, and quantities of each, contained in the "low diet," "half diet," and "entire diet" of the hospital regulations.

7. State the best means for detecting the deceptions of those who pretend either blindness of one or both eyes, or deafness of one or both ears, or stiffness of a joint (say the elbow), or paralysis of an arm or leg.

8. A man is found insensible; how would you ascertain whether the insensibility be due to injury of the head, drunkenness, apoplexy, poisoning with opium, or exhaustion through want of food?

9. Describe the characters and tests of the following deposits in urine: lithic acid, triple phosphate, oxalate of lime, mucus, pus.

C.

1. Describe in their proper order, as displayed in dissection, the parts situated on the anterior aspect of the forearm, including the bend of the elbow.

2. Describe the parts concerned in femoral hernia, and the anatomical conditions distinctive of that form of rupture.

3. Describe the minute anatomy and the functions of the kidney, noticing the sources whence the principal elements contained in its secretion are derived.

4. Describe the membranous portion of the male urethra, its form, relations, and structure.

5. From what parts of what kinds of plants is quinine procured? Describe, in general terms, the method of extracting the alkaloid; mention the plants that afford the best substitutes for quinine.

6. Enumerate the principal entozoa which infest the human subject, and state what you know of their habits.

7. Which is most nutritious: rice-flour, or pea-flour? Upon what do their relative qualities as articles of diet depend?

8. Enumerate the principal animal and vegetable oils; state the sources whence they proceed; and distinguish the volatile, fixed, and irritant.

QUESTIONS AT THE COMPETITIVE EXAMINATION FOR THE APPOINTMENT OF ASSISTANT SURGEON IN THE INDIAN ARMY.—JULY, 1860.

NATURAL HISTORY AND BOTANY.

By Dr. Hooker.

1. What are the botanical characters and properties most prevalent in the natural orders Laurineæ, Rosaceæ, and Cucurbitaceæ? Give examples of the latter used in medicine.

2. Enumerate the principal vegetable narcotics, the plants that produce them, and the countries they come from, and classify them according to their therapeutic actions.

3. In what form are the following imported, and how would you distinguish good from bad samples of each:—Ipecacuanha, rhubarb, sarsaparilla, borax, nitre, antimony?

4. Describe the structure of a dicotyledonous seed, and indicate the relation of its several parts to the seed vessel.

5. Describe the structure of the trunk of a monocotyledonous plant.

6. Define the terms hypogynous, perigynous, epigynous, thalamifloral, calycifloral, and caroltifloral.

7. Of what parts does a grain of wheat consist; what is the minute structure of its contents, and what are its chemical constituents?

8. On what do the peculiar values of milk and eggs depend as articles of food?

9. Contrast the structure of the brain in the higher and lower mammals.

10. Describe the respiratory apparatus in birds, reptiles, and fishes.

11. What parts of what animals produce silk, catgut, silk-worm gut, whalebone, and isinglass?

12. Give, accurately and tersely, the meanings of the following words:—Biology, organism, type, diagram, axis, affinity, analogy, homology, and ontology.

SURGERY.

By Mr. Paget.

1. Describe the usual characters, manners of formation, and treatment of perineal and scrotal fistulæ.

2. What are the most frequent causes and consequences of menorrhagia, and how should it in each case be treated?

3. In what diseases is blood in the urine a prominent and important symptom, and what are the best signs for the diagnosis?

4. Describe the most frequent characters of scirrhous cancer of the female breast, and its diagnosis from the diseases that most resemble it.

5. Describe the processes of the separation of dead bone from—1st, the outer layer of the walls of a long bone; 2nd, from the inner layer; 3rd, from the cancellous tissue; and the processes of repair by which the separation may in each case be followed.

6. Describe the most frequent appearances of varicose veins of the leg, and the diseases of the integuments with which they are most commonly complicated. State the best palliative and curative treatment of each.

7. Describe the principal morbid conditions of stumps after amputation, and the appropriate treatment of each.

ANATOMY.

By Mr. Busk.

1. Describe the structure, relations, and connexions of the medulla oblongata, and state what is known concerning the functions of its several parts.

2. The gastrocnemius and soleus being removed, describe the dissection of the back of the leg from the upper margin of the popliteus to the heel, describing the parts in the order in which they occur, and notice particularly the relative position of the vessels, tendons, and nerves behind the ankle joint.

3. Describe the form, situation, and relations of the thyroid gland.

4. Give an account of the cartilages of the larynx, their articulations with each other, and the ligaments connecting them, and point out the differences of structure which exist amongst the different cartilages and ligaments.

5. Describe the process of ossification in a long bone, and in the cranial bones, and describe the structure of fully-formed bone.

6. Explain the mode in which the images of external objects are formed on the retina, and how real magnitudes and distances are estimated by the sense of sight.

MEDICINE.

By Dr. Parkes.

1. Describe the physical signs in a case of phthisis from the first deposition of tubercle to the formation of a cavity as large as the fist. What would be the hygienic and medicinal treatment during each period of the disease?

2. Describe the anatomical characters of phthisical ulceration of the larynx. How would you treat a case of presumed chronic laryngitis without ulceration?

3. How would you diagnose a case of fatty heart without valvular disease, and what is the treatment?

4. What are the symptoms of effusion of blood, sudden in occurrence and considerable in amount, in the following situations:—In the right corpus striatum and optic thalamus, in the left lateral ventricle, and in both ventricles?

5. What diseases are usually attended with enlargement of the spleen? How would you recognise such enlargement?

6. Under what circumstances would copper and lead occasionally find their way into the body? What are the symptoms produced in each case, and what should be the treatment?

N.B.—At this competition the Examiners adopted the plan of dictating the questions to the candidates, instead of distributing printed questions amongst them, as on former occasions.

Obituary.

WILLIAM PIERS ORMEROD, Esq., F.R.C.S.

This gentleman, the fifth son of George Ormerod, D.C.L., F.R.S., and of Sarah, daughter of John Latham, M.D., was born in London on May 14th, 1818. There was little to remark in his boyhood. He disliked the ordinary school duties, and his teachers accordingly took little notice of him; but those who knew him best recognised in him, even then, an undercurrent of deep religious feeling, and an earnestness of purpose which needed only to be turned into a more congenial channel to produce abundant fruit.

From Rugby and the tutelage of Dr. Arnold, he went, in 1835, to St. Bartholomew's Hospital, where he was articled to Mr. Stanley; and he soon began in earnest the work of his life under the eye of his uncle, Dr. P. M. Latham, and with the guiding friendship of Mr. Paget—a friendship the effects of which in forming his character those only who knew him before can rightly estimate. In 1839 he was most highly distinguished at the annual examination for prizes. In 1840 he discharged the duties of house-surgeon under Mr. Lawrence, and an essay embodying some of the results of his observations during this period was honored with the Jacksonian prize of the Royal College of Surgeons in 1842. On a change taking place in the medical school that year, he was appointed one of the demonstrators of anatomy.

His incessant labors in the wards and the dissecting-rooms began after a while to tell injuriously on his health, and he was compelled in 1844 to resign his appointment and retire into the country. The first results of his returning health appeared in 1846, when he published a volume of Clinical Surgery which he had found leisure to arrange; and in the summer of the same year he established himself in practice at Oxford, where he was shortly afterwards elected surgeon to the Radclyffe Infirmary.

For about two years he filled this situation most honorably and most happily in the friendship of his colleagues, Dr. Greenhill and Dr. Acland, when, in December, 1848, after a period of great hurry and anxiety, he was seized with an epileptic fit; and, the fits continuing, he was compelled to resign this appointment also, and to retire from practice altogether. The last ten years of his life were spent at Canterbury, where he lived with his friends, Mr. Reid and Mr. Andrews; and he died at the house of the latter on June 10th, 1860, the immediate cause of his death being hæmorrhage from laceration of a branch of the middle meningeal artery; the skull having been fractured by a fall at the beginning of an epileptic fit. At the time of his death he was forty-two years old.

News Items, Medical Facts, &c.

The Dwarf Corn-Cutter.—We have to record the death of a person, although not of our own profession, of great reputation as an operator. The lady to whom we refer (Mrs. Seymour Hill) practised her profession for upwards of thirty-five years as a chiropodist at York-gate, Regent's-park, and realized a large fortune. Her fee for the extraction of any number of corns at home or at the patient's house was five shillings, and under no circumstance did she ever demand more. Unlike the set of corn-cutters who infest the metropolis and other large towns, who cut off mites of cuticle at the *moderate* charge of two guinea each, she carried on her business in the most honorable manner. Mrs. Hill was sent for twice to France to operate on the feet of Napoleon III. and the Empress Eugenie. She also attended the principal members of the aristocracy of this country, and would have been commended to the Palace had it not been for her diminutive size and peculiar appearance, she being only three feet ten inches high, and of a very plethoric habit. We cannot allow Mrs. Seymour Hill to pass away without affording our testimony as to the straightforward way in which she practised her calling. Mrs. Hill has left, amongst other legacies, £200 to the Asylum for Idiots, Red Hill.

The Academy of Medicine in Paris.—The actual constitution of this institution includes 46 physicians, 18 surgeons, 6 accoucheurs, 20 pharmaceutists, chemists and botanists, and professors of physical philosophy, and 5 veterinary surgeons.

Natural History of Stone in the Bladder.—A fisherman presented, says M. Zennaro, of Chioggia, (*Gaz. Med. Ital.*, 1859,) symptoms of stone in the bladder at the age of fifty-four, and refused all surgical interference. Seven years afterwards, a fistulous aperture showed itself in the scrotum, and the man was obliged to keep his bed. During the following fourteen years, five more apertures formed between the scrotum and penis, the patient suffering, in the meanwhile, great torture. When seventy-five years old, he had suddenly a sharp attack of pain, and, during the piercing cries he uttered, a calculus weighing eight ounces escaped from one of the perineal openings. The urine then freely escaped by this aperture; but the man still refused all interference, and put up with this inconvenient mode of micturition.

Buffon before the Academy of Sciences of Paris.—On the 18th ult., great sensation was excited at the Academy: In the archives of the Academy a sealed envelope had been discovered, entrusted to the secretary, by Buffon, in 1748; and as more than a century had elapsed since the deposit of the paper had been made, the Academy was entitled to break the seal. The envelope contained a paper relating to the history of generation, being the analysis of the chapters forming the "Treatise on Generation," which forms a part of Buffon's great work. "The Natural History of Animals." It would appear that the great naturalist had been assisted in his labors by persons who thought proper to take advantage of his original view without acknowledgement; and Buffon therefore states, in the paper lately unsealed, that he entrusts it to the secretary of the Academy, in order to establish his priority.

Impervious Coating for Floors of Hospitals.—Miss Nightingale says, "the only really clean floor I know is the Berlin *lackered* floor, which is wet-rubbed and dry-rubbed every morning to remove the dust." The method is thus described in an interesting article on the Hospitals of Munich, by Dr. Mercer Adams, in the *Edinburgh Journal*:—This varnish is prepared by dissolving finely powdered litharge in boiling linseed oil, stirring the mixture constantly during the process. When the oily compound is removed from the fire, some drying material (*seccatif*) is cautiously added, and the whole is stirred to prevent it from being burned or blackened. The varnish requires to be warmed before use, to ensure its perfect fluidity, and it must be well stirred before its application to the floor. The following is a note of the quantities of each ingredient used in Munich Hospital for the preparation of sufficient varnish for the floor of a ward 38 feet long and 24 feet wide;—Linseed oil, fifty-two ounces; litharge, eleven drachms; 'dryer,' eleven drachms." The cost of this in Germany, including labor, is less than four shillings. Dr. Adams does not know exactly the composition of the "dryer," but presumes it resembles the substance known in England as "patent dryer."

New Method of Producing Local Anæsthesia.—Mr. Richardson, the dentist, has sent us a communication, in which he says:—"The subject of local anæsthesia has much excited the attention of the profession lately. Dr. Richardson, Mr. Nunneley, and others, have devoted much time and research to it. Narcotics, congelation, inhalation of ether and chloroform, and, lastly, electricity, have all been tried, but from some practical disadvantages in their application, and from the occurrence of dangerous and even fatal effects, none of these have met either the wants of the case or the general concurrence of the dental profession. In pursuing a series of experiments for effecting certain improvements in the "Tooth Protector," a notice of which apparatus was inserted in The Lancet of 1858, I have devised a plan for causing local anæsthesia during the extraction of teeth without producing a corresponding effect on the system generally—viz, by immersing the affected part in chloroform, and including in the part immersed as much of the adjacent structures as may be required. It is obvious that a plan so simple must be universally applicable, and, should its reputation be maintained, prevent the escape of chloroform, and thus intensify its local effect. The cup is about half filled with cotton wool, which is then saturated with a sufficient quantity of chloroform, generally from ten to fifteen drops. The time within which local insensibility is produced varies from seven minutes to a quarter of an hour. It is true that the local anæsthesia is not, in all cases, equally complete; but even where pain occurs, the remedy will be found to moderate it to a point within which it becomes perfectly tolerable, and has lost the distressing agony of tooth extraction. It is important for the operator to remember, that as insensibility of the part ensues, the cup should be removed, and extraction instantly performed. Of sixty cases, on which the foregoing statements are based, only two occurred in which the remedy failed to mitigate the pain; whilst in ten cases the local insensibility during extraction was complete."

Cause of Death in Submersion.—M. Beau, a distinguished physician of Paris, has published a valuable article, with the above title, in the *Archives de Medecine* of the present month. Six very conclusive, but extremely cruel, experiments upon dogs, are related by the author, who says in conclusion, "These experiments would tend to show that death in drowning takes place by an arrest of respiratory movements, and the contraction of the respiratory sphincters in consequence of an irresistible horror of water, whether or not, at the moment of immersion, some water penetrate the bronchi whilst the drowning person is wishing to draw in air." By the last experiment, it has been shown that death by drowning may be compared to the extinction of life by strangulation.

The Bones of the Fœtus presenting a red color from the Madder mixed with the Food of the Mother.—It is well known that the osseous system of animals who take food mixed with madder will assume a red color. M. Flourens has shown, at a late meeting of the Academy of Sciences of Paris, the skeletons of sucking pigs, the *mother* of whom had been fed with a mixture of ordinary substance and madder.—The bones and teeth of the fœtuses presented the characteristic red color: but neither the periosteum nor cartilages were colored. M. Flourens considers this a decisive experiment, proving (what nobody doubted) that the mother's blood is in direct communication with the fœtus.

Opium and Belladonna Plasters.—Mr. A. F. Haselden, having observed the inconveniences attending the use of these plasters of the Pharmacopœia, of which most medical practitioners are very sensible, (viz, that the preparation runs beyond the margin of the leather, or frequently penetrates it, and stains unpleasantly the clothing,) proposes, in a recent number of the *Pharmaceutical Journal*, methods of obviating them. He recommends the use of resin plaster instead of gum thus, and morphia in place of opium. For the opium plaster he proposes the following formula, which has been successfully employed:—Lead plaster, six ounces; resin plaster, four ounces; acetate of morphia, one drachm, acetic acid and water, of each four drachms. For belladonna plaster, the following:—Lead plaster, six ounces; resin plaster, four ounces; atropine, two grains; acetic acid, two drachms: water, six drachms.

Somnambulists Fined.—In Paris, professional somnambulists have frequently been condemned to fine and imprisonment for obtaining money on pretext of indicating occult facts. Two persons named Nicolas, man and wife, were this week commited to prison for one month, and each fined 50 fr., for swindling out of 20 fr. a man who had been robbed, and to whom they pretended falsely to indicate the thieves.

PRINTED AND PUBLISHED
By JAMES HERALD, 24 Ann-Street,
NEW-YORK.

THE LANCET.

Journal of Medical, Surgical and Chemical Science and Practice, Criticism, Literature and News.

MR. WAKLEY, M.P. EDITOR. J. HENRY BENNET, M.D., J. WAKLEY, Jr. SUB-EDITORS.

IN TWO VOLUMES ANNUALLY.

Vol. 2. NEW YORK, OCTOBER, 1860. No. 4

A Course of Lectures
ON
PAIN,
AND THE
THERAPEUTIC INFLUENCE OF MECHANICAL AND PHYSIOLOGICAL REST
IN
ACCIDENTS AND SURGICAL DISEASES,

Delivered in the Theatre of the Royal College of Surgeons.

By John Hilton, Esq., F.R.S.,

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LECTURE I.

Mr. President and Gentlemen,—There are duties pertaining to every position in life, difficult of fulfilment; and there are duties attached to public professional life, from which, with whatever diffidence and incapacity they may be undertaken, no man can assume to himself absolutely the right to shrink. It is in this duteous but self-mistrustful spirit that I have ventured to accept, at the request of my colleagues in the Council of this College, this Professorial appointment—this, in my estimation, highly honorable professional appointment—whose requirements I must now proceed to carry out as best I can. To this end it is desirable to set out with a clear conception of its objects and intentions. I conceive that the intention of these addresses was based—firstly, on the wise recognition of the fact, that there is much in surgery which cannot be systematized—i. e., which cannot be conveyed from mind to mind in books, in systematic treatises, and, I had almost said, clinically, because the necessary grouping of like cases rarely accompanies clinical opportunities; secondly, on a natural anticipation of the progressive steps which might be foreseen in a scientific art cultivated with such intelligence, such laborious activity, and such an abundant supply of husbandmen as the present century has produced; and thirdly, on the opinion that some one of those numbers who had been actively engaged for a long period in extensive hospital practice would be a fitting exponent of surgical progress. Although it be true that the recent vague and indiscriminate use of the word "progress" has lessened its significance, nevertheless it can scarcely be doubted that the natural sciences have of late years received an impulse from more numerous cultivators, more exclusive research, and more accurate observation than has probably ever before been witnessed. Nor have those arts which, like ours, are based upon the physical sciences lagged in the march of improvement.

This, gentlemen, is my adopted conception of the original intention of this College in instituting the short course of Lectures on Anatomy and Surgery, which I have undertaken to deliver. How far I must fall short of responding to that intention I need not to be reminded; but I feel convinced that the attainment of even mediocrity is best secured by planting a high standard before the mind, with the determination of crossing as much of the intervening space as one has strength for. Nor need I seriously appeal to your indulgence for the manner of expressing my views, as I am sure that many of my listeners will readily appreciate the *facilis descensus* by which an habitual lecturer to students, whom he *can* presume to instruct, may be betrayed into treating an audience (whose high reputation and whose professional knowledge far exceed his own) as if he presumed to instruct them also; nor need I crave your consideration for my embarrassment in the selection of words and phrases appropriate to the ideas which I intend to convey.

"Nam neque chorda sonum reddit, quem vult, manus, et mens
Poscentique gravem persæpe remittit acutum;
Nec semper feriet quodcunque minabitur arcus."

But, gentlemen, phraseology and diction have been to me minor considerations in comparison with the anxiety of choosing a subject which would be fitting for hearers so professionally distinguished. From time to time, you have listened with admiration to my predecessors in this chair, as they expounded to you the more recent advances in the pathology and symptomatology of the most important surgical diseases. Histology, general anatomy, and physiology have been so perfectly elaborated here as to bring under your attention their most recent discoveries; and it appeared to me that my forerunners had left to me, for the present, but one unoccupied department—namely, that of therapeutics. By therapeutics, however, I do not mean to imply the action of drugs, which more especially belongs to the department of the physician; but by this term I would imply the influence of what I may venture to call "Natural Therapeutics" in the cure of surgical diseases, and of which the chief is one so apparently simple as to make me almost apologize to you for selecting it, but which I hope to prove in the course of these lectures so important as to demand the very serious attention of every practical surgeon: I mean the subject of Rest—Physiological as well as Mechanical Rest.

Regarding this subject of Rest in its highest, closest, and best relation to mankind, and looking at it by the aid of my feeble penetration, I would, in all humility, remind you of God's ordinance that man should live by "the sweat of his face," as a punishment for his disobedience. Yet, with this behest, it pleased the Almighty, in the plenitude of His unspeakable benevolence, to consecrate the manifestation of His power and His goodness by permitting man's fatigue and temporary exhaustion to be followed by his greatest earthly solace, the blessing of rest and repose by calm and peaceful sleep; and this, too, as the immediate reward of his labor; nature devoting her best efforts, during this period of rest and sleep, to repair those powers which may have suffered exhaustion, to renovate his bodily strength, and to restore his mental vigor; and thus to make man's punishment a source of real and refreshing enjoyment, by enabling him to resume his labor in all the delicious vigor of a renewed existence.

Entertaining, as I do, the most exalted admiration of Nature's powers of self-reparation, when watching cases of extensive local injury, the thought has not unfrequently occurred to my mind "What would have been the condition of man on earth, had it pleased the Creator to withhold from him this power of repairing his injured tissues?

In my reflections on the subject of rest *as a curative agent*, my mind naturally reverted to that period of man's existence when it was the sole curative means of which he could avail himself. I could but picture to myself the timorous awe which must have been engendered in his mind by the first accident which happened to him. Let us imagine the effect upon our first parents when suddenly thrust out of the garden of Eden, deprived of the direct guidance of angels, and doomed to toil for their daily bread; with hands unused to labor, themselves inexperienced in the substitutes for unnecessary exertion and in the avoidance of local injury, and exposed to all the accidents of a precarious existence; let us try to realize the awe-stricken dismay, the doomful horror, which must have oppressed man's mind on the infliction of his first wound, his first experience of pain; the breach of surface, disclosing to his sight his blood, his life blood, flowing unceasingly, or leaping at sustained intervals, from its opened chambers; his sense of fainting, and his ultimately sinking on the earth under the foretaste of death; this, too, with the recent denunciation, "Thou shalt surely die," still ringing in his ears. Can words depict the hopeless anguish he must have endured! But take the obverse view. See him awakening to life again, the stream of blood stayed, the chasm plugged, his strength revived, and day by day that wound—which he regarded as the badge of death, the vengeance of the Creator's wrath—narrowing and healing till it scarce appeared: what must have been his sense of gratitude to that all-gracious God who still vouchsafed such love to him!

I have adduced these observations for the purpose of illustrating the original promptings of Nature to man, in the alleviation of what must have necessarily befallen him in his altered condition. Pain was made the prime agent. Under injury, pain suggested to him the necessity of, and, indeed, compelled him to seek, rest. Every deviation from this necessary condition of rest brought with it, through pain, the admonition that he was straying from the essential requisite to his restoration; and he must have observed with astonishment the breaking asunder of the newly-formed tissue or the steady development into normal structure, which occurred in exact accordance with the disturbance or rest to the parts, which the sense of pain had enabled him so accurately to regulate, and so beneficially to employ for his own personal relief and comfort.

That the Lord of all should have implanted in man, beyond the endowments which enable him to sustain his existence under the punishment of labor and the vicissitudes necessarily attendant on his sustentation, a recuperative power from the accidents and mischances of his precarious existence, appear to me to supply a too-lightly considered evidence of His merciful and unspeakable love.

No doubt it would be easy to dwell or enlarge upon such a solemn and comprehensive consideration as the primordial power of man's structures to repair themselves; but I must not lose sight of the immediate object of my lecture. I would, therefore, now proceed to the subjects of growth and repair.

Growth is the antetype of repair, prefiguring the physiological capabilities of existing structures to repair themselves; and without diverging from the purport of these lectures, I may say that, so intimate is the association between rest and growth as to make them appear, on a superficial review, to stand to each other in the relation of cause and effect. Accurate observation of the animal and vegetable world certainly reveals their perpetual co-existence; and growth, as a rule, seems to proceed, *pari passù*, with physiological rest.

Mr. Ward* says: "All plants require rest, and obtain it, in some countries, by the rigor of winter; in others, by the scorching and arid heat of summer. Cultivators often fail in their attempts to grow certain plants from want of attention to this essential point. Thus most Alpine plants, which enjoy the unbroken rest under the snow for several months, are very difficult of culture in our mild and varying winters.

"The winter of 1850–51 was ushered in by some heavy falls of snow, with which I filled my Alpine case, giving the plants a perfect rest of three or four months, and with a most satisfactory result; the *Primula marginata*, *Linnæa borealis*, and other species, flowering much finer than usual. Many of these beautiful plants would, I am convinced, succeed well, if kept for five or six months in an ice-house.

"Plants, in hot countries, have their periods of rest in the dry season. In Egypt, the blue water-lily obtains rest in a curious way. This plant abounds in several of the canals at Alexandria, which, at certain seasons, become dry; and the beds of these canals, which quickly become burnt as hard as bricks by the action of the sun, are then used as carriage roads. When the water is again admitted, the plant resumes its growth with redoubled vigor."

The development of plants, maintained in a state of quiescence, and the application of this principle to the purposes of horticulture, are daily subjected to our notice.

Our great master in physiology, John Hunter, has not left this field unexplored, for we find, not only in his published works, but in others which hitherto have appeared only in manuscript, that the subject of rest occupied no inconsiderable portion of his attention. "Most plants," says he, "have their periods of growth and periods of rest, independent of variations of seasons, such as heat and cold. But in the same degree of heat a tree shall rest from growth and then begin to grow again. Perhaps this cessation from growth arises from the formation of seed going on in the plant, or endeavoring to go on, or the time it should go on in that plant; and when that period is over, the season being favorable respecting heat, it begins to grow again, producing what is called the second growth.

"Some plants close their leaves, others their flowers, at particular hours of the day or night; and with such regularity does this period of rest take place, that more than one vegetable physiologist has proposed to construct from them a floral clock."

We all know how eagerly rest is sought for by the lower animals, especially in periods of suffering from injury or disease,—how they endeavor to escape from the prying curiosity of man in order that the injury may be the more speedily repaired.

The value of rest and placidity in fostering the generation of that highly organized animal tissue which forms so large a portion of our staple food is well known to the stock-keeper and grazier. A homely illustration may be found in the fact that in infancy the child who sleeps much mostly thrives; and *mutatis mutandis*, the observation is equally true, that the wakeful, restless child seldom displays the evidence of active nutrition; and doubtless all will admit that in infancy development is in its highest state of activity, and that the healthy infant passes the greater portion of its life in a state of rest and sleep. Growth—the renewal of some parts, and the fresh development of others—seems thus to claim as its helpmates sleep and rest.

Thus far I have endeavored very briefly to point out the relation of rest to growth. I would now say a few words regarding the relation of rest to *repair.*

Repair is but the repetition of growth, and the same elements, the same kindred conditions, are necessary to the same results. Rest is the necessary antecedent to the healthy accomplishment of each (i. e., repair and growth); and this surely is the natural suggestion of a means towards an end which should never be lost sight of by the physician or surgeon. For example, children who are ill and lose their rest waste very rapidly, more rapidly in proportion than older people; but as soon as the morbid condition subsides, and rest asserts its power, the recovery or repair becomes extremely active, accompanied by an increased tendency to sleep—that sleep which seemed to be the great desideratum.

Take, for example, the case of a child suffering much from the irritation of stone in the bladder, which prevents sleep, induces extreme attenuation, and urges the child even to the verge of death. How marked, how almost immediate is the change on the removal of the stone!—in other words, on giving rest to the bladder, and consequent constitutional rest to the general system. The child falls into a profound and prolonged sleep.

In principle, the same remarks and the same reasons would apply to cases of extreme dyspnœa relieved by the operation of tracheotomy, or cases of strangulated hernia after the reduction by taxis or knife, or to the removal of an extraneous body from the auditory canal. In these and in many other instances which might be adduced, the relief afforded by the surgeon is often followed by long and highly restorative sleep in children.

The interruption of rest by local disease, occurring to a person in the middle period of life, does not cause the same degree of exhaustion and wasting as in the younger. They bear the loss of sleep better, because their constitution has to sustain the stress of repair only—not of both development and repair, as in the child; their recovery is slower; their subsequent sleep is not so profound nor so prolonged, nor their rest so complete. The defective sleep and slow repair which manifest themselves in the old after injury of any kind are familiar to us all.

What I have here endeavored to inculcate is, that growth and repair bear an exact relation to due physiological rest, local and general.

Although it is, I believe, impossible to explain what are the profoundly delicate elaborations which are appended to, and associated with repair and growth (those marvellous renewals of life and strength resulting from repose and rest), I need not insist upon their obviously beneficial and constant ministration to the exigencies, emergencies, and necessities of man's life on earth. Although it is impossible to explain how those myriads of agents, of inconceivable minuteness, carry on their recondite labors, we nevertheless know that they are stimulated by forces whose exquisite balance is very readily disturbed: practically, the maximum of result is coequal with the minimum of disturbance, and thus rest becomes the great fosterer of repair. It is equally impossible to deny the manifestation of this influence of rest, whether we search for it in the seat of man's highest intellectual faculties, or in the vital endowments of a simple tube forming a bloodvessel.

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* On the Growth of Plants in Closely-glazed Cases, p. 11.

Let me employ a familiar example to illustrate the effect of rest to the brain, by referring to any overworked member of our own profession at the end of the London season. Free from structural disease, but anxious, worn, looking much increased in years, exhausted by mental labor, not physical exertion, he takes his holiday. His rest from professional duties consists in riding, walking, fishing, shooting: it is physical exertion and corporeal work which he selects for his relaxation; but during the same period he carefully excludes all mental worry. Now, I apprehend that under these circumstances some parts of his brain are nearly at rest; others are occupied with their appropriate function of superintending and regulating muscular exertion: he is, in fact, calling into activity the latent or suspended function of the cerebral centres, leaving the higher, the intellectual part of the brain, to work out its own recovery, from over-fatigue or exhaustion by rest—that is, by freedom from its own peculiar function or occupation. After a time he returns altogether changed in health and improved in general appearance, active, and full of mental vigor, and equal to the resumption of almost any amount of renewed professional exertion, without any fatigue to his brain.

As a matter of observation, I might adduce this additional remark in support of the intended deduction or conclusion regarding the beneficial influence of rest, that those persons who drop off to sleep quickly, anyhow or anywhere, and sleep soundly, undisturbed by active dreaming, are, *cæteris paribus*, capable of sustaining a greater amount of mental and corporeal exertion than those who find it difficult "to get off the sleep"—who sleep lightly, and dreaming much, awake but little refreshed. I suppose that the relative amount of complete or incomplete rest to the brain is the explanation of the capability of endurance of mental and physical exertion in the one case, and of the inability to accomplish an equal amount of what may be desired in the other.

Bearing on this subject, I, like others of our profession, have had repeated occasions to observe gentlemen who work their brains and their nerves with an expenditure of energy inconceivable to the heedless or thoughtless multitude—men of widespread mercantile affairs—men occupied with important calculations, engaged in money transactions on a large and anxious scale—patients whose conditions attested the applicability of these remarks by their mental and physical exhaustion, by their depression of spirits, by their change of character in assuming an aspect of complete enervation and want of self-confidence. Yet, with such men, the restoration to health has been made complete by mental leisure, by "going out of town," and taking plenty of exercise in the open air, but abstaining from their business, the real disturbing cause.

In order to give this subject some additional practical interest in reference to cases of more decided mental disturbance from over work of the brain, I may be permitted to read this note from my friend, Dr. Hood, of Bethlehem Hospital:—

March 22nd, 1860.

"My dear Sir,—In reply to you inquiries, I may state that I am frequently applied to for the admission of lunatics into this hospital, whose insanity is caused by over mental work, anxiety, or exertion, and for whose cases nothing is required to restore the mental equilibrium but rest. Therapeutical measures are not necessary; all the mind seems to need is entire repose. I do not by this mean to imply that the patient reduced to a state of nervous hypochondriasis, or the depression of of melancholia, is to lead an indolent life. Such a course would only aggravate the disease, and probably result in complete dementia; but that those faculties which have been overstretched should have an opportunity of regaining their elasticity by rest and relaxation. For example, an accountant, whose whole day is spent in calculation and thought, becomes by overwork so mentally fatigued that he is incapable of working out with accuracy the most simple sum in arithmetic. Sensible of his incapacity, which perhaps muy result in the loss of his situation, and with poverty then staring him in the face, he becomes melancholic, and medical advice is sought. His physical functions are healthy; no medicine is required or taken, but a holiday from the counting-house, freedom from all thought and anxiety, the substitution of amusement for labor, restores his mind to a healthy state, and he returns to business as competent as he ever was. I have now under my care a man, who for years past has been subject to occasional attacks of melancholia. He is occupied as a compositor, and being both a clever and trustworthy man, is constantly employed. He works early and late for many consecutive hours, and for some months all goes on well; but the stretch on the mind ultimately causes a break-down, from which he cannot rally, unless he leaves his business for a month or six weeks, and takes a complete holiday. He tells me that the cause of his mental suffering is from concentration of thought, and that rest removes the weight and agony of melancholia. In a word, he takes a month's holiday, engages in no occupation requiring thought or bringing with it anxiety, and returns to his duties with the mind of a young man. Some people may reply, "this is not rest; it is only a change of employment." I maintain that is perfect rest to the faculty which has been overworked. Of course we do not propose that the whole mind should remain fallow, but that the pressure should be removed from the particular part which is fatigued.

"I could give you many illustrations from the wards of this hospital, where we are called upon to treat mental symptoms in the cases of governesses, students, clerks, and clergymen; and rest is all they require, and with that the most aggravated cases are restored."

A Clinical Lecture

ON

THE DISTINCTIONS OF TYPHUS AND ENTERIC (TYPHOID) FEVER.

Delivered June 5th, 1860.

By W. T. Gairdner, M.D.,

Physician to the Royal Infirmary of Edinburgh.

Gentlemen,—I am going to say a few words to you upon a subject of great importance, which we have not, till now, had a proper opportunity for discussing for months past—the distinction of the Enteric, or, as it is often called, "Typhoid" Fever, from the form so long and so well known here under the name of Typhus. And as I observe that the doctrines which I have for some years regarded as established, and taught as being beyond reasonable doubt, have quite recently been again brought into question in the Medical and Chirurgical Society of London, I will ask you to observe very carefully for yourselves whatever facts our own experience affords as bearing on the subject.

Since the session began (in May) you have seen me pick out four cases from the miscellaneous list of febrile diseases sent up to the female fever ward; and these four cases you have heard me pronounce to be cases of enteric fever, on the faith of certain diagnostic peculiarities which have been described by various observers, and especially by Louis; but of which I must confess never to have had quite a clear idea until the publication of the researches of Dr. Jenner of London, in 1848. Founding partly on the results obtained by Dr. Jenner, and partly on my own limited experience since 1848, I have never hesitated for some years past to point out the cases of this disease as differing *essentially* from cases of typhus fever—*i. e.*, differing as small-pox differs from measles or both of these from scarlet fever or from typhus. In other words, I have been led to regard this enteric fever as a *specific* type of disease, not, perhaps, always distinguishable in practice from all others, any more than scarlet fever, and even small-pox, are always distinguishable; but when well-characterized, always observed to follow a law of development and diffusion which marks it out as an independent disease, not confounded *in nature*, with any other fever. Now I wish you to observe particularly, and therefore not to be confounded *in name*, in connexion with these four cases, on what grounds I have placed this diagnosis; what doubts we have admitted in making it, and how those doubts have been solved. I may mention that all the four cases are now convalescent; so that I hope we shall not have in any of them that kind of confirmatory evidence which consists in finding, after death, ulceration of the small intestines, so characteristic of this kind of fever.

Observe, now, that judging from our four cases, the characteristic phenomena of this fever are not to be found either in its duration, or in its severity, or in its so-called "typhoid" characters. The presence or absence of delirium, or of stupor, or of dry tongue, affords no ground of distinction. One of our cases had severe and protracted delirium, approaching coma; another had no delirium, but was very deaf and apathetic, with a foul and dry tongue for many days; the other two had hardly any "typhoid" symptoms at all. The heat of skin was equally variable; in one it was scarcely ever much elevated; in all the others it varied greatly at different periods, as also did the pulse. In not one of the cases was there a rapid and decided crisis; but one began to amend about the eleventh day, another about the twelfth day, while the two remaining cases were excessively protracted, and can hardly be said even now, after nearly seven weeks, to be out of danger; the fever having in one of the two degenerated into a kind of hectic type, exceedingly like that of subacute phthisis—a consequence, let me remark, which is very much more to be dreaded in enteric fever than in any other form of specific fever with which I am acquainted.

Nothing, then, can well be more variable or less characteristic than the general symptoms of this fever. I have seen it resolve itself in ten days, with the symptoms of febricula only, or of a mild remittent fever; I have seen it, on the other hand, last nearly as many weeks, and pass imperceptibly into organic disease. It mimics in turn not only all other fevers, but many other general or local diseases—phthisis, pneumonia, meningitis, perhaps more frequently than most others.

Next, as regards complications, we find that in two of our four cases there was intense deafness; in one, if not in both, with disorganization of the ears. In the same two there was pulmonary complication of considerable intensity, and doubtful issue; in one of them resembling broncho-pneumonia, in the other tubercular disease. The other two cases were almost perfectly free from pulmonary or other severe complication, and but for a little diarrhœa at the commencement, might have been said to be free from complication altogether.

But *there was diarrhœa, more or less, in all the four cases* This, I need hardly say, is the particular symptom from which the name "enteric," as applied to this fever, is derived. Diarrhœa, without known cause, with light-colored, ochrey, or blood-tinged stools, and with a tympanitic state of the abdomen, gurgling on movement, or tenderness on pressure in the right iliac fossa, are symptoms as nearly characteristic of this fever as any that can be named. And yet I would not have you to trust to these symptoms too much, for some of them are absent in the majority of cases: and even diarrhœa may be very transitory, as it was in two, at least, of our cases (not lasting beyond a few days, or even hours); or it may appear to have been determined by a purgative. Further, there may be no diarrhœa, and even in fatal cases, with great ulceration of the intestines, diarrhœa may not appear till a very late period. Besides, in typhus fever, and, indeed, in all fevers whatever, diarrhœa, as an incidental symptom, is by no means uncommon.

Now observe, further, that *in all our four cases, there was a peculiar eruption on the skin.* This, when present, and in sufficient amount to be identified, is the great criterion of enteric fever, as the eruption of typhus is also of that disease. I will not dwell on the characters of these eruptions here in the class-room. I will ask you to study them carefully in the wards whenever you have opportunities, and particularly to contrast them with one another. Of the maculated eruption of typhus, you have two excellent examples under observation at present. I will only recall to your attention now the fact, fully demonstrated to you before on many occasions, that in most of our cases of enteric fever the eruption has been very scanty, and that we have not unfrequently hesitated for a day or two to make a diagnosis. Indeed, the first crop of the eruption is rarely quite decisive; but as soon as successive crops, even of two or three spots each, appear, all doubt is removed. But in order to be sure, it is usually requisite in this disease, when the eruption is scanty, to mark each individual spot with ink in such a way as to distinguish accurately the period of its appearance; which precaution against error, accordingly, you saw me take in all these four cases. This in typhus fever it is usually unnecessary to do, and from the number of the spots it would be impossible even if it were necessary.

As regards the characters of these eruptions, I may refer you for details to the excellent descriptions and illustrations of Dr. Jenner in the thirty-third volume of the "Medico-Chirurgical Transactions," with which I entirely concur.

As regards the characteristic phenomena of typhus, and particularly the relation of the eruption to these phenomena as we have lately observed them in Edinburgh, I have no time to enlarge at present, and I will therefore take the liberty of referring you to a short paper of mine in the number for July, 1859, of the *Edinburgh Medical Journal*, on the changes that have occurred in our fevers during the last ten or twelve years. You will there find that typhus like enteric fever, (though not certainly to the same degree,) is a disease of exceedingly variable severity and duration; that its general febrile characters, though following on the whole a certain type, are by no means to be depended on in individual cases; that its complications are few, and follow no regular rule; and that therefore, still more decidedly than in enteric fever, we have usually to fall back on the eruption for its diagnosis.

You will observe, then, that in the diagnosis of enteric fever, as compared with our old and familiar (but, happily, not *of late* very familiar) typhus, I rely not so much on any of the characters of the fever itself, though these are often very peculiar and distinctive when taken all together; but chiefly, and in some cases exclusively, on the eruption. And the eruption I believe to be characteristic thus far, that when sufficiently abundant and well marked, it shows forth quite decidedly which of the two diseases is present. When scanty in amount, and present only for a short time, it sometimes leaves us in doubt, not only whether the fever present is typhus or enteric, but whether it is an eruptive or specific fever at all. Thus you saw that, in one of our four cases, I remained in suspense for two or three days, but was afterwards quite decidedly enabled to pronounce that the eruption was that of enteric fever. And as regards typhus, some of you may have observed that, in the two cases now in the ward, I did not for a single instant admit of a doubt. The eruption, being a well-marked one, was to my mind, a conclusive evidence of the nature of the disease, without a single inquiry as to the symptoms or antecedents of the cases. The same perfectly distinctive character of the eruption, at the first visit has often occurred to me in the case of enteric fever.

Now I presume you will ask, and you certainly will do well to ask, what proof can be presented that the two eruptions alluded to (admitting them, as I think you will do, to be distinguishable from each other in the great majority of cases) indicate two diseases, and not mere accidental varieties of one disease? I have already fully confessed to you that, unless the eruption makes the distinction, there is no sufficient and constant distinction in the symptoms ascertainable during life. Of course there is the additional *fact* of the ulceration of the Peyerian patches—by far the most noteworthy single fact, pathologically speaking, in the natural history of enteric fever. But it will not do to found on a fact like this in the matter of diagnosis; and, besides, after you have settled that there are cases of fever with ulcerated intestines, you have still to settle whether these cases are different in nature from other cases, in many respects similar, in which the intestines are not ulcerated.

Have we, then, here before you *two distinct fevers with two distinct eruptions, or only one fever with two varieties of eruption?*—that is the question. Let us look at it, first, in the light of the six cases at present in the ward.

Two of these cases, I have already told you, were recognized, not by a careful investigation of symptoms, but simply by a single glance at the eruption, as cases of typhus. What is the history of these cases? They are two sisters of a family of five—namely, a mother, three daughters, and a son,—who, with a lodger, occupied a house in St. Mary's wynd, in the immediate neighborhood of a large tan-work. Of these six persons,* five have had fever; and we know positively that in all these it has been typhus with eruption. The brother and the lodger you may see for yourselves in the male fever ward; the mother was the very last case of typhus we had under treatment in our own ward, and it is now more than a month since she died (May 1st). We do not know whence this fever originated; there is some ground for suspicion that the mother was visiting a fever case in another ward in the hospital before she was attacked, but as I cannot trace the story distinctly we had better not insist upon it. Be that as it may, we have here evidently a group of five cases having a common contagion; and all of them prove to be typhus with distinct typhus eruption. Excepting this group, there has not been a single case of typhus in the Infirmary, I believe, since the 25th of April, and then only one, from the New Town. In March, there was only one case—a girl from Dalkeith. In February, there was only one case—the last of a little group which, like the present group, was composed of typhus cases only. In January there were one or two other cases. In the Dispensary books I find no case of typhus recorded since March, except one of those which I have noticed as admitted here. So that for three months, at least (we may say confidently) Edinburgh has been almost clear of typhus fever, with the exception of the cases now enumerated.

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* Another daughter, the only remaining person of this group of six, has since passed through typhus fever with distinct eruption, under our observation. (July 4th.)

As regards the four cases of enteric fever, I find that three of the four are apparently quite isolated cases. This is in accordance with what we know of this disease, which has much less tendency than typhus to run into groups of cases, and is, I believe, much less contagious; but in the fourth case we have got hold of a link in a chain or group of cases, and this time the locality is not in Edinburgh, but in Penicuick, a village at nine miles' distance. I can tell you nothing about these cases from my own experience; but, fortunately, they were seen by Dr. Thin, of Penicuick, who sent in the girl *as a case of enteric fever*, and assures me that her brother had the same fever, with a like eruption, in a severe form; and that other cases of the disease occurred in the same house. And I know that Dr. Thin's observation is most implicitly to be trusted upon this subject, because he was a most valued pupil of mine a few years since, and had ample opportunities of studying fever during his attendance in the Royal Infirmary. Nothing short of having seen these cases with my own eyes could give me more confidence than this in telling you that they actually were cases of unquestionable enteric fever. Now, besides the cases under observation at present, I find recorded in the books of the fever wards only one case of enteric fever in May, two in April, one in March, one in February, two in January—all, so far as known to me, isolated cases; and, further, I find the Dispensary books quite void of any reference to the disease.

Here, then, is the kernel of my argument. Fever has not been epidemic in Edinburgh for six months at least; on the contrary, it seems probable that there have been hardly a dozen cases of typhus in all, and about as many of enteric fever, in the entire town during the whole of that period. But five cases are found in a single household, and these are all, without exception, cases of eruptive typhus. One case of enteric fever is sent in from Penicuick, and forms part of a little epidemic or local visitation there, which we are assured by Dr. Thin, consists of enteric fever only, and not at all of typhus, as distinguished by eruption. The two diseases are therefore, as distinct as they can possibly be. No case of typhus has given rise to anything but typhus; no case of enteric fever has given rise to, or been associated with, anything but enteric fever.

Now this is only a small contribution to a kind of experience of which Dr. Jenner has availed himself with great care and exactness in the much greater field of London. Here, again, therefore, I may refer you to his paper, already mentioned, for further details. But there is this advantage in a small field, that you can be much more sure of exhausting your facts. No one can pretend to have had access to all, or nearly all, the fever cases of London, during however short a period. But in Edinburgh, Dr. Begbie and myself probably have seen, or have had the means of knowing about, very nearly all the fever cases; and, therefore, when I declare to you that, within my experience for ten years past, no instance has occurred of a decided origin of enteric fever in a group of typhus cases, or of typhus fever in a group of enteric cases, I am entitled to say that I have obtained very strong evidence in corroboration of the view, that these two diseases are, in reality, different diseases, and not mere varieties of the same disease.

Last summer I made a very careful survey of the whole fever-field of Edinburgh (if I may call it so) for several months together. It was not an epidemic season; but I gathered about thirty cases of typhus and twelve of enteric fever, and into the whole details of these I inquired with the greatest possible minuteness, visiting every one of the fever localities, except one or two in which I was quite sure the cases were isolated. The result was that in no case could I light upon a suspicion that typhus had given rise to anything but typhus, or enteric fever to anything but enteric fever. The details of this inquiry you will find in the *Edinburgh Medical Journal* for September, 1859.

We had, however, in the Infirmary a melancholy proof that although typhus cannot give rise to enteric fever, or enteric fever to typhus, it is possible for persons who have passed through enteric fever to take typhus very soon afterwards. Last summer we were unable to avoid, during a certain period, the association of the two diseases in the same ward in rather excessive amount. Now mark, what followed. No case of typhus was seized with enteric fever; but no less than four of the dozen cases of enteric fever were attacked within a few weeks with typhus, and I am sorry to say that the mother of a very interesting family of five (who all, except the father, passed through enteric fever) died of this secondary attack of typhus caught beyond question from typhus cases in the ward where she was visiting her daughters. Both these daughters afterwards sickened of typhus; but although one of them was excessively debilitated, we succeeded in saving both. Another young girl had the two diseases in succession, but in each case mildly.

I beg you to notice very particularly these facts; for not only are they full of instruction as to the danger of associating typhus cases with enteric fever, or indeed with any other fever, in the same ward, but they form the most conclusive of all possible proofs that the two diseases are distinct diseases. Typhus fever is not subject to a relapse; and it is a curious and indisputable law with respect to it, that it almost never attacks again, at least within a period of years, these who have had it before. Yet here we have three members of one family, within a few weeks seized with two distinct febrile attacks, with two distinct eruptions, the attacks being separated the one from the other by a perfectly distinct convalescence. To make these out to be mere varieties of typhus fever would require the whole laws of that fever, as ascertained by innumerable observations here and elsewhere, to be set at naught in this particular instance.

Original Papers.

ON A

NEW METHOD OF VERSION IN ABNORMAL LABOUR.

By J. Braxton Hicks, M.D., F.L.S., &c.,

Assistant Physician-Accoucheur at Guy's Hospital, and Physician to the Royal Maternity Charity.

In "Schmidt's Jahrbucher,"' b. 104, Prof. Carl Esterle has described the possibility of version by external manipulation, with a view to rectify abnormal positions of the fœtus, which he had detected, by careful study, some time anterior to labour. He directs the method by which version may be accomplished, and explains the principles upon which his plan is founded. Having effected the version, he secures its permanence by external support, as bandages, &c. He also alludes to the possibility of this form of version after labour is begun, but admits that when the membranes are ruptured there is much less chance of success. Wigand, Mattei, and Stolz had remarked before him on the possibility of the operation. Martin, of Jena, has related many cases of version by external manipulation. He, as also those mentioned above, has tried *only external manipulation*, and a considerable objection to its extensive use was, that it required much skill to make out the limbs of the child externally.

Before I had read their plans of operating, I had already employed a method, combining the power possessed by external manipulation with the power and certainty derived from pressure and touch through the cervix, and which, even since the perusal of them, appears to me more satisfactory, and more easily managed by those who have not given, nor are able to give, to the external diagnosis of fœtal position such care and skill as Prof. Carl Esterle; for even Martin, of Jena, insists that by his plan it is necessary—1st, that immediate delivery be not called for; 2nd, that there be a capacious pelvis; 3rd, that there be active pains; 4th, that the child be living. From the following remarks and illustrative cases, I think I shall show sufficiently that the method I have employed does not require such conditions. Accepting, then, the valuable fact, that the fœtus in utero can be turned without the necessity of the entry of the hand into the uterus, I shall now prove the extensive applicability of the plan I have adopted, to labour in its various complications.

I do not consider it needful to stop here to prove the major proposition, because it will be immediately acknowledged, after a few trials on the plan described below. The points to which I wish therefore to draw the attention of the profession are—1st, the most certain method of operating; 2ndly, the general reasons of its superiority to other methods; and 3rdly, the cases to which it is more particularly, and also exclusively, adapted.

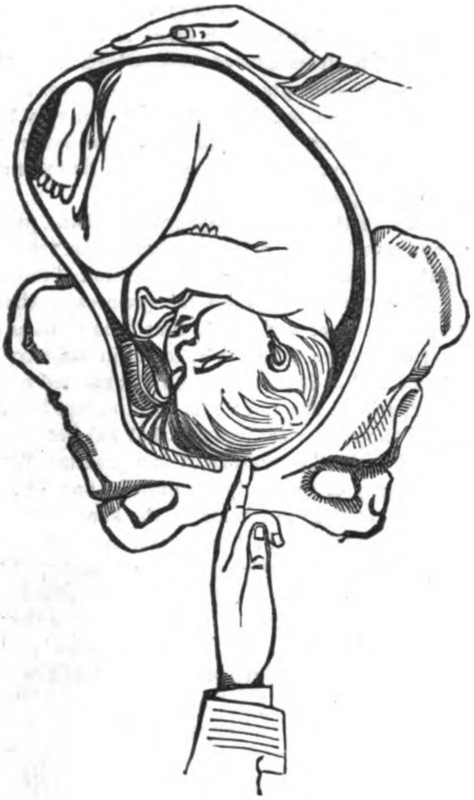
In considering the first point—viz., the most certain method of operating, it will be necessary to reflect upon the principal facts in regard to version. One of the most important, and one which more particularly bears upon the method presently to be alluded to, is, that if we place by any means in our power the fœtus in utero in a transverse direction and abdomen downwards, the knees of the fœtus are opposite the os uteri; and if the os is large enough to introduce a finger, the knee can be hooked down and the presentation secured. Thus it is evident that it is merely necessary for the fœtus to assume the above position, where delivery by knee or foot is sought for, or where we wish that the delivery may be at our command. I shall defer alluding to version of cephalic into pure breech presentation till I speak of the method of operation.

The next fact to be borne in mind is that, should the fœtus, either naturally or by the method to be described, present by its back to the os uteri, the case would be very rare in which one side or the other was not the more dependent, and consequently one or the other knee be within finger-reach of the os.

The third fact needful to reflect upon is this, that the shape of the cavity of the fully-developed uterus being oval, with the long axis placed vertically, the tendency of the slight pains towards the end of pregnancy is to place the longer axis of the fœtus in a corresponding direction; or, in other terms, to cause it to present by the head or breech; so that if the fœtus be at any time situated transversely, a slight preponderance of force in either direction will be sufficient to determine the ultimate presentation. It will be thus perceived that, the head being heavier than the pelvic extremity, the natural tendency of a spontaneous rectification will be to head presentation; but at the same time it would have taken but little force to have caused it to rise to the fundus.

Having premised these considerations, we will discuss the other facts as they arise in the application of the above principles, taking for granted that it is admitted possible to turn the fœtus in utero from the outside. The method I have found successful, and very easy of application, is conducted thus:—We will suppose the simplest condition, a case where the uterus is passive, membranes unbroken, the liquor amnii plentiful, the os uteri expanded sufficiently to detect the presentation, which is cephalic, and in the first or fourth position (occiput to left side); the patient is in the ordinary position, the trunk curved forwards as much as possible, to relax the abdominal muscles. Introduce the left hand with the usual precautions, into the vagina, so far as to fairly touch the fœtal head, even should it recede an inch. (This generally requires the whole hand.) Having passed one or two fingers (if only one, let it be the middle finger) within the cervix, and resting them on the head, place the *right* hand on the *left* side of the breech at the fundus uteri, as shown in Fig. 1. Employ gentle pressure and slight impulsive movements on the fundus towards the right side, and simultaneously on the head towards the left iliac fossa. In a very short time it will be found that the head is rising and at the same time the breech is descending. The shoulder is now felt by the hand in place of the head, as in Fig. 2; it in like manner is pushed to the left, and at the same time the breech is depressed to the right iliac fossa. The fœtus is now tranverse; the knee will be opposite the os, and, the membranes being ruptured, it can be seized, as at Fig. 3, and brought into the vagina.

FIG. 1.



Having now the labour at command, the case must be treated according to the circumstances which call for turning. In obedience to the law above stated, when the fœtus is placed transversely, a slight impulse will determine the final position of the head. When the leg is seized, therefore, it is advisable to place the right hand beneath the head in its new position on the left side, and gently press it towards the fundus. The same law renders it very easy to convert the cephalic, shoulder, neck, or even natural transverse, into a breech case. In either of these conditions it is merely necessary to push up the head, and, removing the left hand from the vagina without bringing down the knee or foot, place it on the breech in the right iliac fossa, so as to depress it into the cavity of the pelvis. No extra force should be used, for it will be found to obey a very "gentle persuasion." Indeed, the change is completed sometimes spontaneously, and the foot is at hand before it is expected. The breech now presenting, it is advisable to retain it till labour is fairly set in, by a firm bandage placed ex-

FIG. 2.

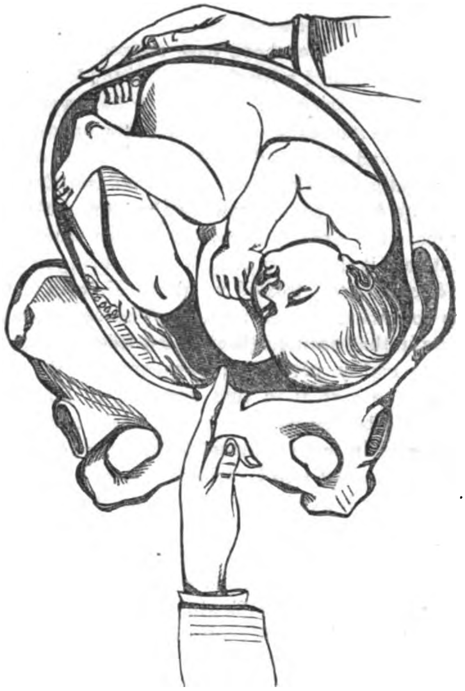
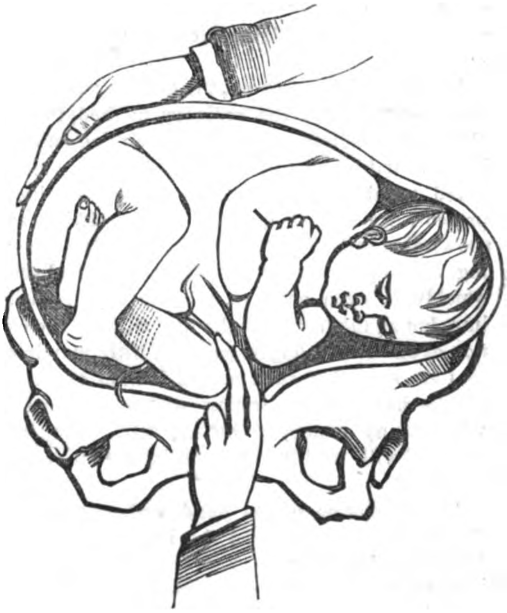


FIG. 3.



ternally, and, should it be required, a pad on either side of the fundus. It should now be treated as an ordinary pelvic presentation.

We have in the above case supposed the fœtus to have been placed with the back to the left side (first and fourth positions). Should it, however, be certainly ascertained to be placed in the opposite direction (second and third positions), the only alteration required is to make the pressure and impulses in the opposite directions, following the same rules. But suppose the exact position cannot be made out: in that case it should be considered as being in the first and fourth, and treated as above directed; and for the following reasons: —1st. The fœtal head presents in that position (back to left side) in from sixty-five to eighty per cent.; consequently the practice would be correct in that proportion. 2nd. Should the child be turned over on its back, one side is almost certain to be the most dependent; consequently a knee or a foot will be within a finger's reach. 3rd. Should the lower limbs not be near, it can be readily converted into a breech case, whereby the foot or breech will be close to hand. Suppose, again, the liquor amnii has escaped—although it does make the operation more difficult, still, as the cases to be quoted will show, it is easily managed even then, the principal impediment being the activity of the uterus; should that render it troublesome, suspend it for the moment, either by chloroform or opium, and I believe the escape of the waters will be found to be no objection to operation. With respect to other conditions which may retard or interfere with it, they must be treated in the same manner and on the same principles as apply to the ordinary method, and require the same judgment on the part of the operator.

In considering, secondly, the general advantages of this operation over the ordinary method, I disclaim all intention of unnecessarily depreciating an exceedingly valuable and ancient operation—one which has saved numberless lives, and one with which, at present, we cannot dispense. Still, if it can be shown that in a considerable number of cases requiring version, the operation can be accomplished as quickly, or even more so, without the necessity of introducing the hand into the uterus, with the exception of one or two fingers passed a little way into the os, I am sure that such a modification of this more or less hazardous operation will recommend itself without any panegyric on my part. For in that case it will readily be perceived that we shall avoid—

1. The addition of the hand, and perhaps arm, to the uterine contents; and the irritation present and future, caused by it.
2. Entry of air within the uterine cavity.
3. Liability to rupture of uterus.
4. Much of the pain and distress felt in the ordinary plan.
5. The removal of the coat, and baring the arm of the operator; and, as a minor consideration,—
6. The fatigue and pain endured by the operator while the hand is in utero.

I think the removal of these objections a matter of considerable importance, even if option were given us in all cases; but more especially so when we add to this the power the plan I have suggested gives us—namely, of being enabled to turn under circumstances totally impossible by the older method. I feel confident that all impartial practitioners will, after a fair trial, adopt it—I will not say to the total exclusion of the other, but certainly upon every possible occasion in preference; for there is one thing upon which much stress can be laid, which is, that the unsuccessful attempts to accomplish the new method, instead of increasing the difficulty of delivery by the older plan, tends rather to make the latter more easy; at any rate, the fœtus can easily be returned to its original position.

Prof. C. Esterle has shown great skill and patience in endeavoring to detect during the seventh and eighth months of pregnancy the position of the fœtus, and deserves great praise for practically showing the possibility of version at that time; but as such opportunities are rarely to be found in ordinary daily practice, and as it scarcely can be expected his skill and experience are to be met with except in such as devote their time specially to that subject,—and as, coupled with other reasons, it is a practical fact that the majority of the malpresentations and complications of labour do not come to the knowledge of the practitioner till labour has set in, or till as in hæmorrhage, active interference is necessary,—I think that I am not overrating the value of the above easily-applied and safer method of version; for the finger inside the cervix gives a sure indication as to the progress of the pressure on the breech above.

It may also be noticed as an advantage that the membranes need never be ruptured, as was generally practised, though not always, by the older method.

The third point I proposed for consideration was the question—To what cases is the above method more peculiarly applicable, and to what conditions is it exclusively so?

From the foregoing remarks, it will be readily seen that it can be applied at the earliest period a malpresentation is detectable. As soon as the finger can enter the cervix, so soon can version be performed, converting all forms into breech presentations. In malpositions of the head, perhaps it may be found capable of improving its position without having recourse to complete podalic version; in puerperal convulsions, diminishing the great risk in such cases from the addition of the hand to the contents of the uterus; in narrow brims, when version is decided upon, it will save the pressure upon the os uteri against the projecting parts of the brim. To these points I shall allude in a future communication, and shall for the present confine myself to the advantages this method gives us in *placenta prævia*—at least, in every form of partial insertion. I have as yet had no opportunity of testing its applicability in absolutely central insertion, and perhaps we can scarcely hope for any peculiar advantage in that condition, which becomes so formidable if the os continue undilated. Although in most writings it is said the hæmorrhage which in these cases has already occurred is generally sufficient to dilate the os, still many will present such a prolonged rigidity of that part, that death may take place before entry of the whole hand can be effected; and it has so happened that this form has in my own experience been by far the more frequent. These cases are the more serious because of the difficulty of obtaining a firm compress on the bleeding part. The contracted cervix generally has been seen where the hæmorrhage has begun some time before the full term (at the seventh or eighth month), when the lower portion of the uterus has not fully expanded.

The following cases will illustrate the advantages of the method above described, whereby, as soon as the finger can enter the os, it is practicable to bring down the knee or foot, and by that means have the command of the hæmorrhage and labour at the same time; for the conical form of this natural plug is just suited to the requirements of the case. By gentle traction on the limb, the os is completely and circularly filled up; and as it dilates, the size of the plug, as it descends, increases, whereby a continuous pressure can be kept up, its force varying at will according to the requirements of the case. Having then secured this plug, by keeping hold of the limb, we can afford to wait till, on the one hand, the system has rallied to bear the completion of the labour; or till, on the other, the os has dilated to permit the evacuation of the fœtus. Thus we gain an early command of the labour at a time long prior to that permitted us where the hand must be introduced; while we gain much valuable time, save much blood, and husband the patient's strength. But, having so done, my opinion is, that hastening delivery would be highly improper. The only thing that could justify us is the suspicion that hæmorrhage was going on internally. As far as I have seen, this has not occurred; nor is it at all probable, in this condition of cervix, which is pressed upon by the plug for some distance—at least, far above the source of the bleeding.

Case 1.—Mrs. B——, of Walworth, a delicate, feeble woman, the mother of six children, about thirty-eight years old, and eight months advanced in pregnancy. For the four previous days she had been losing blood in gushes. Her attendant requesting me to see her, I found her, on my arrival, very blanched, pulse thready, very weak, and quick; voice very feeble; altogether in an exceedingly low state from flooding. The os uteri was about the size of a crown-piece, thickened, irregular, and unyielding; the placenta presenting three parts across it; the membranes not broken; no pains had appeared; fœtus alive; movements feeble and convulsive; head presenting. Blood was still oozing. I, therefore, gave her plentifully of spirits and water; and introducing my hand into the vagina, I endeavored gently to dilate the os. After trying some time, with very little effect, I thought it would be a great advantage if I could turn without entering the uterus, and put in practice the method previously described. The head receded to the left side as the breech came down. The shoulders then presented; but in a minute more they followed the head, and then the leg was easily felt through the membranes. Having broken them, I drew the knee into the vagina, and, plugging the os with the leg and breech, and keeping up a slight traction, I waited to allow rallying further. I also gave a dose of secale, with stimulants, to ensure contraction subsequently. As the os expanded, I gently drew down the fœtus, which was fully born (but dead) in about three quarters of an hour. She did not lose half an ounce of blood during the whole process, nor during the removal of the placenta, which was slightly attached, but not adherent. Had she lost another gush, she must have died at the time. However, the quantity already lost had been too much; for after lingering out three weeks of extreme exhaustion, she died.

Case 2.—Mrs. ——, of Castle-street, Borough; aged about thirty-five; thin, but tolerably healthy; eight months advanced in her eighth pregnancy. During the fortnight previous to my seeing her, she had lost blood by gushes and clots, at no time very severe; and about six hours before there was a small gush, with clots, and at the same time the liquor amnii escaped, but no pains followed. I found there was still some bleeding, though not extensive, with clots in the vagina. Her appearance had not been affected by the loss. The os had been dilated to half the full size, but now it was so excessively irritable, that upon the slightest touch of the finger it contracted so that only one and at the most two fingers could enter. The placenta was stretched two-thirds across it, posteriorly. It here seemed to me that if the leg and breech of the fœtus could be made to form the plug, the patient would be secure. The only way possible, without much risk, was to endeavor to put in practice the method before described, which was easily done, though not quite so readily as in Case 1, in consequence of the irritability of the cervix; still it was effected, notwithstanding the escape of the waters, without any force or pain, and under circumstances which would have precluded entry of the whole hand. By means of two fingers in the os, I drew down the knee into the vagina; and Mr. Woodman (the senior obstetric clerk) having passed a loop of tape through the bend of the knee, I left the case in his charge, with instructions not to hurry the birth, but to keep up gentle traction, and to plug the cervix. In about three hours, the os relaxed and dilated to its full size, when the fœtus was brought down. It had apparently been dead for a day or two. Not the slightest drop of blood was lost during the whole process of turning and extraction, and the woman recovered without a single bad symptom.

Case 3.—Mrs. P——, a fine, healthy person, well made, who had always had rapid labours. At the time I saw her, she was at full term of her seventh pregnancy. Having been seized twice within the previous month with a gush of blood (each time about half a pint), she was kept quiet. Twenty four hours before I saw her, she had had the third gush, which had continued ever since. I saw more than a pint, and the nurse said she had lost altogether as much more. At the time of my visit, the face was not much blanched, nor was the pulse much affected. The os uteri was fully dilated, the placenta half-way over it; uterus perfectly inactive. The liquor amnii had escaped, but the fœtal head was high up; no violent bleeding, but considerable oozing. There can be no doubt that the older method of version would have been very practicable. Still, as every circumstance was favorable, I turned by the method previously recommended, and found it very easily and speedily managed. In about two minutes sooner than I expected, the foot was in my hand, and drawing the leg through and the breech to the os uteri, I kept up a gentle traction. No uterine action ensuing secale was given. In a quarter of an hour pains appeared. After the breech had passed the cervix, finding the funis pulsating, I hastened the delivery, good pains assisting. The child, although not breathing when born, was soon recovered by artificial respiration. No hæmorrhage appeared during the operation or expulsion of the fœtus. The placenta not being thrown off soon, and a little hæmorrhage appearing, it was removed, being rather firmly attached.

Case 4.—Mrs. C——, Borough, aged about twenty-eight, of strong constitution. At about three weeks to completion of full term of her fourth pregnancy. About three weeks before, she had been seized after a fright, with sudden and severe flooding. This passed off till twelve hours before I was called to her, when she was taken with a sudden flooding, nearly equal to a chamber-vesselful, accompanied by faintings, which continued during the twelve hours before I saw her. I found her perfectly blanched; pulse very feeble; extremities cold; could still swallow, and had taken about half a pint of brandy. The os uteri was about the size of a five-shilling piece; the placenta protruding, apparently centrally attached, but on carefully searching I found a portion of it thinner at the posterior aspect, and, carrying the finger backwards, the membranes were reached, unbroken; the head presenting. Being anxious to have command of the labour, with as little shock as possible to the patient in her very low condition, I employed the method mentioned above, with so much ease and rapidity that in about one minute the foot was in the vagina. In this case the membranes were ruptured at the beginning of the version; this, however, made no difference to the accomplishment of it. Continuing to make a plug of the breech, I waited till the system had rallied by stimulants, and in order to allow the os to expand and the pains to come on. In about an hour and a half the pulse improved, and two doses of secale were given; about half an hour later, gentle traction being employed, the child was born dead. The placenta was expelled by natural efforts. No hæmorrhage occurred after I commenced version. She recovered satisfactorily.

Case 5.—Mrs. ——, the mother of eight children, about eight months advanced in pregnancy, was taken in the night—seven hours before I saw her—with sudden flooding, which was estimated at more than two quarts. Four hours after she sent for her attendant, who found her with her extremities cold, blanched and lying before the fire. From that time till I saw her she had been losing blood by continuous oozing, considered to be about half a pint. On my arrival, I found her blanched, pulse scarcely perceptible, voice strong and considerable muscular power. The os was dilatable, about the size of a crown-piece, but had not been so more than an hour. The placenta came at that time only to the margin. It had before been felt over the os in part. The liquor amnii had escaped; no pains. As the oozing was still going on, I was anxious to secure a plug. I therefore directed and assisted Mr. Wadkins (the senior obstetric clerk) in performing version by the method above described which was done in a few minutes. The moment the head rose into the iliac fossa, the shoulder presented, and then as instantly the foot was in the hand of the operator. During this time we gave largely of stimulants, and apparently the patient had still considerable power. By the weight of the arm traction was kept up against the cervix, and in about half an hour the child was born (but dead), without any hæmorrhage at all. The uterus contracted well, and the placenta came away naturally. Warmth and stimulants were employed; but the pulse began to flag still more, and the powers gradually failed, till, about an hour after, she died rather suddenly. It seems to me that if the version had been performed as soon as the os was capable of admitting a finger, the draining of blood might possibly have been prevented. The quantity lost at first was not precisely known till after death, and coupled with the muscular power and uterine pains, there did not seem any justification for retarding delivery, as has been recommended in extreme exhaustion.

Wellington-street, London Bridge, July, 1860.

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ON PERIODICITY AS A CHARACTER OF DISEASE.

By Richard Hughes, M.R.C.S., L.R.C.P.Ed.

Surgeon to the Brighton Orthopædic Hospital.

There is one disease—ague—of the phenomena of which periodicity is an invariable characteristic. There are other affections—the neuralgiæ and nervous headaches—which very frequently assume a regularly intermittent character. And, occasionally, in the course of various diseases a tendency to a periodical type is manifested.

Quinine and arsenic are specifics in ague. They are hardly less valuable in neuralgiæ and nervous headaches. And when, in works on Medicine, we meet with the remark that sometimes the symptoms seem to come on periodically, it is generally coupled with the statement that in these cases quinine will be found of the utmost value.

What is the *rationale* of these facts?

The cause of the regular periodic recurrence of the paroxysms of intermittent fever is discussed at length by Dr. Watson in the first volume of his Lectures on Medicine, p. 758. After passing in review the various theories that have been advanced to account for it, he leaves the subject as one altogether uncertain. Cullen's hypothesis as to the influence of diurnal habit he thinks the nearest approach to the truth; but admits that this will in no way account for the tertian and quartan types of ague. In this state of uncertainty, the peculiar poison—malaria—which causes intermittent fever has been generally regarded as the source of its periodical character. It is supposed to act in the way of a ferment in the blood; and the zymotic process set up by it is supposed to have its regular development and decline, the paroxysms being its effect on the nervous system when the process attains its acme. When other affections manifest a periodic type, it is supposed that their subjects have either had ague, or been exposed to malarious influences. On the other hand, quinine and arsenic are considered to be antidotes to the malarious poison, and thus to counteract its periodic influence in all affections which tend to assume that type. But I think I shall be borne out by general experience when I assert that periodic phenomena are manifested in many a case of neuralgia or other disease, when the hypothesis of malarious influence is altogether shut out. This theory, therefore, in itself *à priori* most improvable, must be at once rejected.

If, then, the periodicity of ague does not depend upon the peculiar poison which occasions it, does it depend upon the peculiar portion of the organism which that poison affects? This is universally acknowledged to be the nervous system. I would agree with this view, but would still farther limit it to a particular division of the nervous system—the *sympathetic*.

Let me place one after another some of the principal phenomena of the cold stage of ague, with those produced by galvanization of the sympathetic in the neck.

In the cold stage of ague "the patient feels chilly; the blood deserts the superficial capillaries; he grows pale, his features shrink, his skin is rendered dry and rough, his respiration is quick and anxious; his pulse frequent sometimes, but feeble: all the secretions are usually diminished; he may make water often, though generally he voids but little, and it is pale and aqueous; his bowels are confined, and his tongue is dry and white."—(Watson, *op. cit.*, p. 735.)

Let Dr. Brown-Séquard now tell us the result of his galvanizing the sympathetic in the neck. "The pupils are dilated; the eyelids wide open; the globes protruding. Blood deserts the superficial vessels; secretion is diminished or checked; temperature and all vital functions lowered."

It is clear from the above that the essential phenomena (diminished afflux of blood to the surface, check of secretion, and lowering of temperature) of the cold stage of intermittent fever may be produced artificially by excitation of the sympathetic nerve and are dependent upon the contraction of the blood-vessels thereby occasioned. The hot stage is no less explicable as the natural reaction of the vessels to even beyond their normal calibre, and finds its precise analogue in the phenomena which results from section of the sympathetic in the neck.

It would appear from the above that the sympathetic system is that part of the organism specially affected by the malarious poison, and that the phenomena of ague depend on a periodic excitation of it by the poison, followed by an equally immoderate reaction in the opposite direction, which latter at length settles down to the equilibrium of health. And upon this hypothesis the beneficial influence of quinine and arsenic in this disease receives its perfect *rationale*. For these are well known as (to use Dr. Handfield Jones' term) "toners of the vaso-motor nerves"—i. e., of the sympathetic, and their tonic influence thus exerted will obviously render it capable of resisting the morbid irritation of the malarious poison—a view which is confirmed by the well known fact that quinine is no less valuable as a preventive than as a curative agent against this malady.

But will the fact of the sympathetic system being the seat of the phenomena of ague help us to explain the periodic character of these phenomena? I think it will. Let us consider the actions of the heart and the uterus, two muscular organs supplied mainly or entirely by this nerve.

What is the cause of the rhythm of the heart? It cannot be the stimulus of the blood, or of anything else within the body; for a frog's heart will continue its regular systole and diastole for some time after its removal from the thorax. The only motive agency then left to it is that of the sympathetic ganglia, which are imbedded in its substance. To these nervous centres we are therefore shut up in our inquiry as to the heart's action; but the influence of these centres is neither continuous nor occasional, but rhythmical—i. e., periodic.

The uterus resembles the heart in its also possessing numerous sympathetic ganglia imbedded in its muscular walls, and in entire independence of the cerebro-spinal system in its movements. Is there anything here periodic? We immediately think of the regular monthly recurrence of the phenomena of menstruation, and of the act of parturition, which (as first shown by Dr. Tyler Smith in the pages of THE LANCET) is determined by the menstrual periods, being normally due on the 21st day after the commencement of the last menstruation."*

From the marked periodicity apparent in the actions of these two organs, exclusively animated by sympathetic ganglia, we seem justified in the conclusion that a periodical evolution of nerve-force is characteristic of this division of the nervous system; and if this be the case, we cannot be surprised that it should give its peculiar character to phenomena resulting from the effect of a poison upon itself. Thus the periodic character of the paroxysms of ague is reduced under the mere general law of the periodic character of all phenomena, morbid or natural, over which the sympathetic system presides, dependent upon the endowment of this system itself.

It follows that periodic phenomena appearing in the course of any other diseases must be attributed to an involvement of the sympathetic system in their morbid irritation; and thus the beneficial effects of quinine and arsenic in all such cases fall under the general law of their toning influence upon that system. I may instance the most common affection which inclines to a periodic type—nervous headache. Dr. Symonds, in his admirable Gulstonian Lectures upon this subject, shows by many arguments that the vascular nerves (i. e., sympathetic) of the brain and skull are the seat of pain in this affection, and in common with general experience, regards quinine and arsenic as the sheet-anchor in its treatment.

I venture to submit that the following original conclusions are established by the preceding considerations:—1. That ague is an affection of the sympathetic system. 2. That its periodical character is dependent upon a periodicity impressed upon the sympathetic system, and manifested in all the phenomena, morbid and natural, over which it presides. 3. That the *modus operandi* of quinine and arsenic in ague and other periodical affections is the toning influence exerted by them on the sympathetic nerve. The doctrines also of the dependence of the heart's movements on its imbedded ganglia, and of the menstrual periodicity as the determining cause of parturition, receive no slight corroboration; and our instinctive recourse to quinine and arsenic, whenever periodic symptoms manifest themselves, receives alike its *rationale* and its establishment.

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* This theory should be more widely carried out in obstetric practice. I have been delighted at the exactitude with which it has enabled me to predict even the day of delivery. The advantake of such a pre-knowledge, whether to patient or practitioner, is immense.

Brighton, August, 1860.

ON

A CASE OF MYELITIS AND EXTENSIVE SPINAL IRRITATION,

WITH

PARALYSIS OF THE LEFT LEG,

CURED BY THE ADMINISTRATION OF ERGOT OF RYE AND THE EXTERNAL USE OF BELLADONNA.

By C. R. Bree, M.D., F.L.S.,

Physician to the Essex and Colchester Hospital.

Susannah C——, aged thirteen, admitted into the Essex and Colchester Hospital, Feb. 24th, 1859. The following history, down to the middle of November, was obligingly furnished to me by Mr. Johnson, the house-surgeon:—The account this girl gives of herself is, that she has never had any particular illness until about two years ago, when she had fever, which laid her up for about seven weeks; but she has always been delicate. On admission, she complained of feeling weak, and being unable to follow her employment, that of factory hand. She states that she has been accustomed to work in a room heated by steam pipes, and that she was in the habit of fainting away at her work. She dates her present illness from running home one day in the wet, when she felt pain in the side, with slight cough, which confined her at home for a few days, when she resumed her employment for two days. She had medical advice, but received no benefit. On April 22nd (whilst in hospital), she had a good deal of pain in the head and back; and, on coming up stairs, she fell and lost consciousness, and remained insensible from seven P.M. till two A.M., during which time she was very rigid, but did not struggle. On recovering sensibility, she felt pain in her left leg, which she attributed to rheumatism, and did not mention it until she discovered that she had lost all power of using it, and that it had no sense of feeling. About this time she complained of pain in her back. She was put under the influence of mercury, and had the tartrate of antimony ointment rubbed along the course of the spine. From this time she had attacks of insensibility about once a week, until Sept 29th, when she left the hospital on five weeks' leave of absence much improved in health. She was readmitted at the expiration of her term of leave, having had several of her old attacks, and was altogether not so well in health as when she went out. Her leg was now more particularly examined, when she was found to have neither motion nor sensibility from the knee downwards. The muscles and integuments of the thigh appeared scarcely, if at all affected. She was ordered tonics and good diet, and the leg to be galvanized daily, and frequently rubbed with a rough cloth.

The patient came under my care about the middle of Nov., and I continued the above treatment for another fortnight, without any benefit.

On the 1st of December, I carefully examined the spine, which was extremely tender on pressure from top to bottom. So sensitive was this region, that she could not bear the slightest pressure without pain, and even gentle percussion made her cry out. This tenderness was more pronounced in the lower part of the dorsal region, just below the antero-posterior curvature in this situation, but not localized over any particular vertebra. She had had no fit since she came under my care. Her complexion was sallow and expression dull. She had never menstruated. Appetite bad; bowels regular; urine normal. The left leg was completely paralysed below the knee, and insensible to pain. She could use the flexors of the thigh so as to bend it partly towards the abdomen and there was no anæsthesia above the knee. I ordered her to have two grains of ergot twice a day, and the spine to be rubbed night and morning with a liniment containing extract of belladonna; the leg to be well rubbed with the flesh brush, and the diet to be liberal, with moderate allowance of beer.

The only alteration in this treatment up to the 25th of January, 1860, was that of increasing the dose of ergot to four grains after a slight appearance of the catamenia on the 22nd of December. After the first fortnight she began gradually to amend, and the notes in my hospital book are—

Jan. 14th.—Begins to walk nicely *without assistance*; sensibility has in a great measure returned in the limb.

23rd.—She is daily gaining more use of the limb; spine is still very tender.

25th.—To be made an out-patient. On the 5th of February she walked up to the hospital from her residence in the town. She had quite regained the natural use of the limb, but the spine still remained tender. To continue the liniment, but omit the ergot. I have not seen her since.

Remarks—Now, what was the pathology of this interesting case? We have, in looking over the history, evidence of a lesion of the cerebro-spinal system and its consequences—loss of consciousness, tonic spasms, paralysis, anæsthesia. The spinal curvature I satisfied myself did not depend upon disease of the bony column, and the tenderness along this tract indicated, I think, inflammatory action, as well as that combination of symptoms, as Dr. Brown-Séquard has it, termed "spinal irritation." I think it will be admitted that the amendment was entirely due to the treatment. It was founded upon the above view which I took of the pathology of the case, and upon the principles so ably set forth by Dr. Brown-Séquard as to the therapeutical action of ergot and belladonna in the treatment of myelitis. In my notes of the lectures I heard delivered by that distinguished physiologist in Edinburgh I find the following:—

"Strychnine is almost useless in all lesions of the spinal cord, and especially hurtful in congestions of that structure. It acts by producing paralysis of the bloodvessels of the cord, and therefore in its lesions it can only increase the morbid effects. In sympathetic paraplegia, however, it is very useful. Ergot of rye and belladonna may both be used where strychnine cannot; they excite reflex action by acting upon the bloodvessels of the nerves."

In the summer of last year I saw two cases of myelitis with partial paralysis of the lower extremities, the bladder, and rectum, successfully treated with ergot of rye and belladonna by Professor Bennett, in the Royal Infirmary of Edinburgh, such treatment being founded upon Dr. Brown-Séquard's views. I therefore venture to draw the attention of the profession to the subject by the details of the present case.

Colchester, 1860.

REPORT OF A CASE OF

BRONZED SKIN OR ADDISON'S DISEASE.

By John Housely, M.D., Warsop.

Henry ——, aged thirty-three, farm-laborer, unmarried, states that he had gonorrhœa in November, 1858; was ill in March, 1859, which he attributes to extra work during the lambing season. He consulted the late Mr. Hammond, and was a week absent from his work. After resuming his occupation for two or three weeks (he cannot fix the exact time), he was again compelled to rest. He was now ordered to live as well as he could, and take cod-liver oil. On this occasion, he was away from work for three weeks; then returned to his occupation and continued until the end of June, since which time he has been unable to work. At this time I saw him. He complained of weakness, loss of appetite, nausea, occasional vomiting, pain at the epigastrium, and constipation of the bowels. The color of his face and hands was brown, which I thought might be caused by the hot weather, for he was not confined to the house. About August, 1859, I considered the case might be one of Addison's disease. In the beginning of September, at my request, he was seen by a medical friend, who looked upon the case as hepatic disease. This gentleman advised him to have as good diet as he could procure; at the same time I had prescribed the tincture of the sesquichloride of iron. After this, I saw very little of him until Feb. 26th, 1860, when he sent for me. I was now informed that he had been at home during the last five months, and was becoming weaker. Appetite bad; at times feels sickly; complains of pain a little to the left of the navel; bowels rather constipated; stools dark-colored; urine acid, lightish color; pulse 94, soft and feeble; slight dulness on percussion below the left clavicle; sounds of heart feeble. The brown color of the face and hands still remained; over the chest it is almost natural, but becomes much darker over the abdomen and thighs; that of the penis and scrotum is a dingy black, which he has noticed for the last two years. There is also a dark ring round the umbilicus. No odor is perceptible about the body of the patient. I attended him for a short time, and he felt somewhat better. I was again requested to see him on the 20th of April. My notes are as follows:

April 20th.—Bowels constipated; sickness; radial pulse scarcely to be felt. An ounce and a half of compound senna mixture to be taken immediately.

21st.—Bowels acted twice; sickness continues. To take two minims of Scheele's hydrocyanic acid every four hours.

22nd.—Takes scarcely any food, and what he does take is vomited. Continue medicine. To suck ice occasionally.

23rd.—Has slept during the night; bowels constipated; there is nausea, but no vomiting. To take the compound senna mixture (an ounce and a half), with the addition of ten minims of chloric ether to each dose.

24th.—Has taken only cold water during the last twelve hours; sickness subsided.

25th.—Has vomited a large quantity of bilious matter.

26th.—Takes only cold water; anything else is immediately rejected.

27th.—Has slept during last night. Takes no food whatever. Died at half-past nine in the evening.

I obtained permission to examine the abdomen. The post-mortem inspection took place twenty hours after death, Mr. Ward, of Wellow, kindly assisting me. Rigor mortis well marked; the body somewhat wasted. The color of the skin was lighter over the legs and chest, and darkest on the penis and scrotum. The kidneys, portions of liver, &c., were sent to Dr. Wilks, of Guy's Hospital, who has favored me with a note from which I extract the following remarks:—"I have no doubt that yours is a genuine example of the disease (Addison's), and that the capsule which is now before me is a true specimen of the morbid change. It consists of a hardness of a fibro-albuminous tissue degenerating in parts, exactly as we have before seen. This tissue is smooth, firm, and of a pinkish color. When examined by the microscope, it is found to be composed of nucleated fibre. In the midst of this are some yellow softer masses of the same in a state of degeneration, and resembling what is ordinarily called scrofulous matter. The skin shows the true pigmental change in a very beautiful manner. I have made a section, and the coloring matter is seen beneath the cuticle in the rete mucosum following the course of the papillæ, such as is met with in the skin of dark races of men. The kidneys, liver, and spleen are quite healthy. The liver has near the surface some cretaceous masses, which are probably the remains of some old tubercular disease."

August, 1860.

ON A CASE OF

ABSCESS OF THE RIGHT KIDNEY.

By S. G. Chuckerbutty, M.D.,

Assistant-Surgeon, H.M. Indian Army;
Assistant-Physician Medical College Hospital, Calcutta.

Seeing in The Lancet,* the able account of a case of renal abscess, by Dr. W. R. Basham, I am induced to send the following report of a parallel case of disease of the right kidney, which occurred in point of time simultaneously with that recorded by the above gentleman.

A native lady, the wife of Baboo ——, apparently sixteen years old, and physically well formed, came under my treatment in the year 1853. She complained of a severe pain in the region of the right kidney, attended with frequent micturition and fever. This was the first time she had suffered from this disease, having had many similar attacks before, almost every month, extending over several years. The urine was of a deep-red color, and intensely acid. Pressure over the right kidney increased the pain, but there was no swelling nor induration to be perceived by the hand. Both the kidneys, the liver, and the spleen were of normal size. There was no pain in the bladder or anywhere else. The appetite was bad, and there existed a morbid craving for acids, without which she could not take her meals.

I diagnosed at this time *lithic acid gravel*, and prescribed liquor potassæ, with infusion of gentian which presently removed the distressing symptoms. But she would not desist from using acids, and so the relief was only temporary, and the attacks recurred from time to time, with severe symptoms of acid dyspepsia and red urine. During some of these attacks, I saw her again, and, as usual, she got relief after a few days, during which her diet was necessarily low and free from acids. Afterwards, she resided chiefly with her mother, and was treated by a number of medical men, without, however, any permanently beneficial result. She came under me again in 1858. At this time, the urine, when passed, was opaque and milky, and had been so, I now learnt, for some time past. After standing, it separated into two parts—a supernatant, transparent, reddish fluid, and a thick, greenish-yellow deposit. The fluid part was acid in reaction, and became turbid from heat and nitric acid. The deposit was singularly free from ropiness, but readily converted it into a transparent jelly by the action of liquor potassæ, and under the microscope it presented all the characters of *pus corpuscles*. There was much tenderness in the right lumbar region, where pressure caused great agony and faintness. The right kidney was a little enlarged, but the left kidney, the spine, the liver, the spleen, and the bladder were perfectly healthy and free from pain. She suffered greatly from a fever, which returned every day; had little or no night rest, very bad appetite, and anorexia. Nevertheless, she was in appearance not much reduced, and could go about the house, though with pain. The matter in the urine at this period was certainly one-half of the entire quantity.

From these facts I diagnose the existence of pyelitis of the right kidney, probably from the presence of a calculus in some of its calyces.

The treatment consisted in the administration of opiates, cod-liver oil, quinine, sulphate of iron, and gentian, together with generous diet, and abstinence from acids. Under this plan she improved somewhat, the urine becoming clearer from a diminution in the purulent secretion, and the pain less; but no prospect of an immediate cure being held out, she grew restless and discontented, and after some weeks returned to her mother's.

I did not see her again till the 31st July, 1859, when I was requested to examine her, and express my opinion of her case. I found her lying on her left side, with the legs drawn up, slightly emaciated, but not in proportion to the intensity and duration of her sufferings, perceptibly full in the right lumbar region, which was very tender to the touch. Percussion over this swelling elicited a dull sound, and manipulation with the hand detected a hard but elastic tumour, stretching from the lumbar spine to the umbilicus, and from below the right lower ribs to the crest of the ilium. The dulness was not continuous with that of the liver, a clear space intervening between the two. Fluctuation could be distinctly felt on grasping the tumour, which was well defined at this time, between the hands, and making alternature pressure and relaxation. She was exceedingly weak, bed-ridden, hectic, and deprived of all rest by day as well as by night, except under the influence of powerful narcotics, which at best succeeded only in lulling the pain for the moment. She perspired most profusely at night. The tumour was of the size of the cover of a curry-dish, and had enlarged rather rapidly of late, its growth being preceded by a sudden disappearance of the matter in the urine, and attended by an increasing aggravation of all her sufferings. She had had a great variety of remedies applied before I saw her, such as alteratives, tonics, antiperiodics, anæsthetics, narcotics, antispasmodics, counter-irritants, &c., without any avail. Further, I ascertained that the abdominal parietes were not adherent to the tumour, from which they could be lifted up.

Under these circumstances, I expressed to the patient's friends that I thought the passage from the infundibulum into the ureter had become suddenly occluded by the impaction of a calculus which had been displaced from its old position in some of the calyces, and that the consequent accumulation of matter in the kidney from that arrest, pressing upon and distending its substance and capsule, was the cause of the tumour; and that unless it was relieved through the ureter, the bowel, or the abdominal walls, either by spontaneous or by artificial means considerable fears were to be entertained of a fatal result. Until adhesions took place, nothing could be done beyond relieving the pain and sustaining the vital powers by narcotics, wine, and a tonic regimen. In short, it was prudent to temporize, and watch the further progress of the case.

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* *Vide* April No. page 287.

On the 14th of September following, I was again asked to see the case previous to any operative procedures being adopted. I now saw a great bulging in the right lumbar region, extending visibly to the umbilicus; the parietes of the tumour had become glued to those of the abdomen; there was distinct fluctuation; but there was also now a considerable diarrhœa, which had lasted for some days, with a mitigation of the pain; and the percussion note over the tumour, instead of being dull as before, was now tympanitic. Suspecting from this that the abscess had burst, I advised a consultation, which was accordingly held on the 16th of the month, and at which it was agreed that the abscess had given way, probably into the bowel, since the relief of the symptoms was simultaneous with the setting-in of the diarrhœa; but as the patient had ordered her alvine evacuations to be thrown away, we had no sufficient opportunity of coming to a clear decision on this latter point. It was therefore judged right to stay operative interference for the present, and to continue to watch the case.

Six weeks elapsed before I was again called to this case. In the meantime a large abscess had formed immediately under the skin, extending from the level of the eighth rib to the dorsum of the ilium on the right side. The exhaustion and emaciation of the patient were truly alarming; the pain was most intense, and spread from the loin down the thigh to the right knee, so that she could not move this limb at all. The loss of appetite was complete; the skin was dry and hot; there were frequent shivering fits and colliquative perspirations, and the most powerful narcotics failed to procure the smallest relief. Further, there were a constant moaning and anxious restlessness.

On this day (Nov. 6th, 1859), in consultation with my esteemed friend, Dr. Edward Goodeve, I opened the abscess at the right loin with a lancet. A considerable discharge of matter was the immediate result, and this discharge continued in large quantities, both morning and evening, every day for many weeks afterwards. A probe, introduced through the puncture, entered a large cavity in the direction of the kidney, in which the whole length of it could be freely turned about in every direction without any impediment whatever. The matter was very thick and creamy, with an aromatic odor. After the operation, the patient was troubled with a frequent micturition, and a tensive pain at the orifice of the urethra, both of which symptoms yielded to fomentations with hot water and a sponge. The swelling contracted daily in proportion to the discharge of matter. the hectic disappeared, the pain grew less, and the appetite improved a little. So, on the whole, matters seemed to be in a fair way. But as the tumour subsided the outer opening in the skin became widely separated, and lower than the inner opening into the cavity of the abscess: a probe passing from the former to the latter upwards and backwards towards the transverse process of the twelfth dorsal vertebra. The discharge of matter grew scanty, the hectic symptoms returned, the pain was again severe, shivering fits occurred, and a fluctuating swelling became visible on and above the ilium, the matter from which was but partially emptied under pressure through the original puncture.

Accordingly, towards the latter end of December, a second operation was performed at the lowest point of this abscess, and a very large quantity of pus let out. A catheter, introduced through this opening, passed freely into a cavity, upwards and backwards, towards the right kidney, its whole length, without any opposition. The discharge of matter from the old opening stopped while sitting up, but on lying down it returned, this being then the lower of the two. On the day of this operation, some blood flowed from the old opening when she lay down, showing thus a free communication between the two openings. The urine continued clear the whole time, except for a day or two occasionally, when it deposited a little mucus, which, however, disappeared under the use of liquor potassæ. The hectic fever was more or less, in proportion to the diminution or freedom of the discharge. The spine throughout has been sound, straight, and free from pain. But not so the ilium, on the dorsum of which the matter had precipitated even before the first operation. After that the swelling, as well as the pain over it, disappeared for a short time, until a return of both rendered the second operation necessary. Ever since then this bone has been the seat of disease, and the skin over it traversed by large, angry-looking veins. The discharge of matter has continued abundant, without any alteration in its quality; and there is now, besides the communication upwards and backwards, another directly inwards, through a hole in the ilium below its crest, with the cavity of the pelvis. The discharge through the first, or the upper and more posterior opening, continues free in the recumbent posture, and she has grown again greatly emaciated and feeble from hectic, pain, pyrosis of the stomach, and want of sleep. She can extend the right leg and thigh while lying down without difficulty, but cannot support herself in standing, on account of the pain in the pelvis. The fondness for acids continues as strong as ever, and, being the only child, and wayward in disposition, it is impossible to prevail on her to give them up. For the last two days there has been a discharge of blood from both the openings, which has been evidently caused by violence in trying to crawl about more than usual, and some scratching from the calculus.

There is little doubt now, that the abscess had burst into the cellular tissue, under the skin, through the abdominal muscles, and that she would have lost her life if the operation had been any longer delayed, as the matter was rapidly spreading, and her sufferings were most dreadful and exhausting. It is probable also, that the abscess in the pelvis is an extension of the renal abscess (as the pain on pressure in the direction of the bladder, frequent micturition, &c., indicate), with which the external abscess has formed a communication by caries and perforation of the right iliac bone The right lumbar region has greatly retracted from the shrinking of the primary seat of the abscess, so that the space between the last rib and the crest of the ilium on this side is more depressed than the corresponding space on the left side.

Calcutta, April. 1860.

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ANALYSIS OF 1000 CONSECUTIVE CASES ADMITTED INTO THE SEAMEN'S HOSPITAL, "DREADNOUGHT."

By Stephen Ward, M.D. Lond., M.R.C.P., &c.

The following analysis of 1000 consecutive cases, admitted into the Seamen's Hospital, under my care, and giving a fair representation of the cases admitted, during the period over which they extended, under the care of my colleague, will, I think, be interesting to the members of the profession. It will correct the notion entertained, not only by the public, but by many medical men, that the *Dreadnought* is little better than a "refuge" for patients suffering under scurvy and chronic dysentery. While it constitutes a peculiar field for the study of organic and blood diseases, contracted in tropical climates, and of the behavior under and relative liability to disease of different races, it also, as will be seen by reference to the subjoined table, affords ample materials for the study of the acute and chronic diseases to be met with in other metropolitan hospitals:—

Brain and Nervous System.

Cerebral congestion	5	
Delirium tremens	19	
Epilepsy	10	
Insanity	2	
Neuralgia	2	
Paralysis	24	
Spinal debility	1	
Sciatica	11	
Tetanus	1	
		75

Thoracic Viscera.

Heart and large vessels	23	
Asthma	3	
Bronchitis—acute, 24; chronic and slight, 42	66	
Emphysema	3	
Hæmoptysis	6	
Laryngitis (subacute and chronic)	5	
Pleuritis	5	
Pleurodynia	1	
Pneumonia and pleuro-pneumonia	41	
Phthisis	77	
		230

Abdominal Viscera.

Œsophagus, schirrus of	1	
Constipation	1	
Colic	5	
Diarrhœa	47	
Dysentery	56	
Dyspepsia	5	
Epiploitis	1	
Peritonitis	6	
Stomach, derangement and disease of	7	
Tonsillitis	15	
Worms	4	
Spleen, disease of	7	
Liver, disease of, including cirrhosis and abscess	23	
Kidneys, disease of,	17	
		197

General Diseases.

Fever—typhoid, 60; typhus, 1; relapsing 2; febricula, 46	109	
Ague, 94; hemicrania, 1; ague cachexia, 7	102	
Anæmia and debility	40	
Rheumatism—acute, 53; chronic and slight, 44	97	
Exanthemata—measles, 5; scarlatina, 11	16	
Erysipelas	11	
Skin diseases	14	
Periostitis	3	
Anasarca	8	
Cholera	1	
Opium-eating, effects of	1	
Scurvy	96	
		498
		1000

It is my intention, from time to time, to make some general and clinical remarks upon scurvy, ague, some abdominal affections, and upon the peculiar cachexia and anæmia induced by the tropical and other influences to which sailors are exposed.

Finsbury-circus, July, 1860.

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ON

A CASE OF NUMEROUS CALCULI IN THE BLADDER OF A FEMALE.

By John Hunter, Esq., M.A.,

Formerly Surgeon to St. Mary's Hospital, Manchester.

In the month of March last, I was consulted by Mrs. S——, aged fifty-five, of Robert-street, Ardwick, near this city, under the following circumstances:—She had been suffering from some urinary disease for the last five years, and which, at the time of her application to me, presented the undermentioned salient symptoms: Incontinence (not absolute) of urine; pain sometimes excessive on micturition; the urine much clouded with mucus, but without any calculous deposit, and it was acid. Together with these there were great emaciation and nervous prostration. The paroxysms of pain had lately become more frequent, and the general state of the patient had assumed a graver aspect. Having had recently under treatment two somewhat apparently similar cases, and which I cured, I set down Mrs. S.'s case to be one of simple chronic cystitis, and adopted the line of treatment used successfully in the other cases—viz., tonics and antacid medicines, and nitary injections. I should state, that though I several times use a silver catheter for drawing off the urine, no calculi presented themselves, and not being searched for, did not become evident. In this the mistaken diagnosis consisted.

Under the above treatment the symptoms gradually improved. There was no discharge of mucus, the pain ceased, the bladder was able to hold its contents for nearly three hours, and the general condition of the patient was greatly improved. I now suggested country air to recruit the strength, and she was on the eve of departure when I was surprised by being sent a calculus an inch long and a third of an inch wide, in character phosphatic, which, after several hours of agony, she had passed On visiting her again, and introducing the catheter, the bladder seemed to be full of stones. All her former symptoms had returned in an aggravated degree, and the pain she was suffering was intense. The next day I introduced (having in the meantime exhibited palliatives), a piece of gentian root,—a hint derived from the French,—cut smooth to the exact size of the urethra. After being left in for twenty-four hours, the calibre of the urethra was enlarged, so that the little finger could be introduced, and with a forceps I was able to get away a great number of small stones and *débris*. These were also of phosphatic formation. I repeated my efforts, the patient being under the influence of chloroform, on the two succeeding days, washing out the bladder with tepid water, but found that one stone resisted all attempts either to remove or crush it. Under these circumstances, and with the able assistance of my friend, Dr. Brabazon, I proceeded to operate in the following manner:—The patient being under the influence of chloroform, I introduced into the urethra a concealed bistoury, and made two incisions, right and left, towards the rami of the pubis. Not being yet able, by the additional space thus afforded, to get away the stone, I made a curved forceps, introduced through the urethra, project in the vagina, and cut upon it. Still, however, there was not sufficient room, the forceps grasping the stone being locked in the wound in attempts being made to withdraw it. At last I was obliged, with one cut, to throw the wound and urethra into one, when I was able to extract the stone, which is nearly the size of a hen's egg, and lithic acid in character. The after-treatment consisted in perfect rest, tying the knees of the patient together, strict cleanliness, tonic medicines, and good diet. There were no bad symptoms following the operation, the discharge from the wound gradually abated, the parts being left entirely to themselves, and in four weeks and two days after the operation,—namely, on the 31st of May, 1860, when paying my last visit, the patient was found to be free from pain, the wound perfectly healed, no discharge, the urine quite healthy, and the bladder able to retain its urine for three hours. The general state of the patient was also quite satisfactory.

City-road, Manchester, 1860.

The Dust Nuisance Abated.—Experiments have of late been undertaken at Lyons to allay the dust by keeping the streets in a kind of permanent moisture. The agent used is hydrochloric acid, which prevents the rising of the dust by forming chloride of calcium, a deliquescent salt.

ON A CASE OF ABSCESS OF BONE.

OPERATION; CURE.

WITH CLINICAL LECTURE THEREON BY MR. QUAIN.

(*Reported by* W. L. Winterbotham, House-Surgeon to University College Hospital.)

Charles J——, aged thirty-one, married; a pale fair-haired man; admitted May 3rd, 1859, into University College Hospital, under Mr. Quain.

Previous history.—Native of London; painter by trade, but never had cholic or rheumatism. When twelve years of age, he severely twisted his right leg, and bruised the skin over the tibia. He was confined to bed for five weeks, and a number of openings made their appearance over the front of the bone, through which matter and pieces of bone were discharged. When sixteen years and a half old, he struck his right knee, which caused it to swell, and occasioned much pain in the tibia: this was poulticed. An abscess then formed over the upper end of the bone, which discharged and healed up. Two years and a half ago, he slipped and struck the head of the right tibia against the rim of a barrel. He then entered this hospital, where the part was poulticed, and he left well in a fortnight. The limb now remained sound till about four weeks ago, when he again began to feel pain in it,—the pain being severest at night, and preventing him from sleeping. On this account he again applied for relief at the hospital.

Present state (May 5th).—When both legs are examined, there is a marked difference perceptible between them,—confined, however, to the upper halves of the tibia. The right one is considerably larger than the left, and is arched forwards, so that the part below the head, usually slightly concave at each side, is changed into a convexity. There is no redness or other ulcerated appearance of the skin. When this part is pressed on, the patient complains of an aching pain. This pain, moreover, is always present in a slight degree; and, upon careful questioning, he states that there is a throbbing sensation, like, as he says, to the feel of a "gathered finger." He does not sleep; his face expresses suffering; appetite bad; has had distinct and repeated attacks of shivering, but none lately; he suffers no pain except in the diseased limb.

Operation (May 10th).—Mr. Quain made a crucial incision over the anterior surface of the right tibia, about two inches below the head, and applied a full-sized trephine. On removing the bone, a large quantity of pus welled up from a cavity in the cancellated tissue, of the size of a large walnut, at the distance of about an inch and a half from the surface; into this a strip of lint was inserted, and afterwards a poultice was applied. Ordered to take a full dose of opium.

12th.—No pain, but a soreness about the part.

24th.—General health remarkably good; wound is granulating freely at the surface and sides, but not at the bottom.

June 14th.—Since the last report everything has gone on favorably; the wound has gradually closed, till there is now but a small opening left.

After having attended two or three times as an out patient, the wound completely closed, and the man returned to his work.

In his clinical lecture, on the subject which this case illustrates, Mr. Quain observed, that "the first point—the main point—is in this, as in many other cases, the formation of an accurate diagnosis. To establish it here the chief reliance must be placed on the character of the pain and swelling. As regards the pain, it is often difficult, in examples of local suffering, to determine if the suffering is owing to an appreciable local disease or not; and the presence of local disease—say of bone—being decided on, it is essential to determine its nature, for on the decision arrived at must depend the treatment.

"Very intense pain is found to exist without appreciable local disease; for instance, I was asked by a surgeon connected with a dispensary in this neighborhood, to see one of his patients who had suffered for a considerable time from pain—excruciating pain—in one of the knees. I found the knee and the hip free from evidence of organic change. It was an example of local nerve-pain. Subsequently, the limb was amputated at the thigh by an eminent surgeon, who took a different view of the cause of the suffering. But the joint was sound, and the operation only served the purpose of proving again, and beyond all question, what was well known before, that local pain by itself is not a proof of appreciable local disease.

"The reverse of this too, happens:—e. g., I know a person who complained of a tingling in the fingers of one hand, and inability to use it. He had been treated for more than a year, and had taken a large quantity of medicine, in the belief that the tingling in the nerves arose from an affection of the brain. Yet it was wholly the result of a swelling in the wrist, of which he was almost unconscious, and to which he had not called the attention of the physician under whose care he had been. The pain and disability in the fingers were removed by the removal of the disease in the wrist.

"Examples of pain occasioned by disease at a distance from the seat of distress are of every day occurrence at the hospital. You will remember a man suffering much in the wards just now, who complains exclusively of the knee, which is free from disease, the real malady being at the hip. Such cases must be familiar to you. But one case, from its singularity, may be dwelt on for a moment, as affording a clear illustration of this kind of suffering. A female patient complained of intense pain under the balls of the toes, across the foot. She had long been under treatment at various institutions; had taken much medicine, including arsenic, and she stated that she derived relief from that drug, and only from it. The relief, however, was transient. Suspecting from the appearance of this person, that there might be a local cause,—perhaps from pressure on some part of the nerve, at the end of whose branches the pain was felt,—I made a closer examination along the limb, and found a small swelling on the back of the thigh, beneath the hamstring muscles. Pressure upon it aggravated the pain of the foot. I removed a bone like tumour from the interior of the internal popliteal nerve, and the long suffering in the foot was thenceforward at an end.

"Pain, then, may exist without appreciable local disease at the part where it is felt or elsewhere; it may result from disease, more or less remote from the seat of suffering; and it occurs (this is most common) in close connexion with actual disease. Of this last, examples are constantly before us in the hospital in cases of disease of the bone.

"I have said enough to show the importance of a close inquiry into the cause of that important symptom, *pain*, in order to determine what it really betokens. To the indication it afforded in the case under observation we shall return presently. Meanwhile a few remarks on the *swelling*. We have to inquire if that swelling was a certain indication that active interference was necessary. Here, too, as in every other matter of practice, cases previously observed will help us by illustration or contrast. Brief references will be enough for our present object. A man, aged forty, felt in going down stairs, and afterwards in walking anywhere, a good deal of pain in the upper part of one leg, and he fell lame. On examination, the tibia was found to be enlarged above the shaft, and the enlargement was accompanied by a change of shape. The bone was filled out on each side below its head, so as to be uniformly rounded, instead of being angular, as it normally is. The contrast between the limbs was very well marked. The pain, though severe during exercise, was diminished, but did not cease, during rest.

"With improvement of health, which had been somewhat impaired, this gentleman was relieved of his local pain, and now, after the lapse of twelve years, he is able to take any active exercise on foot, without suffering; he *feels no pain*, but the *swelling continues undiminished*.

"That like the case the history of which I have read to you, was an example of swelling of the bone confined to the upper end, and accompanied with pain. We are seldom without examples of enlargement of the shaft of the tibia, attended with more or less suffering from pain. The enlargement or hypertrophy in these cases commonly affects the thickness of the bone only, but occasionally its length as well. The worst cases of thickening of the bone that I have seen have been connected with syphilitic taint of the system. In such cases the shaft is the part chiefly affected.

"Let us turn now to the pain and the swelling in the case recited, as the guides in forming a diagnosis. First, as regards the pain. After careful examination, it was plain that the pain did not arise from any general or constitutional state of the patient. He had never been subject to any local pain without a local disease. He was a laborious and healthy man, not one of the class of persons in whom pain without a local cause is found to arise. There was not, moreover, any disease in the limb, except in the place referred to, to account for the pain, and no other conclusion seemed possible but that the pain arose from the swelling at the point at which it was felt.

"The character of the pain was not without its importance. The patient described the pain as like that of a "gathered finger;" it was such, in fact, as might be expected when pus was being formed.

"Again, as to the swelling it was confined to the end of the bone, and it is at that part of the bone that collections of pus have been met with. It had not lasted for a great length of time, and there was tenderness to the touch over it.

"These were the circumstances which led to the conclusion that the patient's sufferings were owing to abscess in the cancellated part of the bone, and to the practice pursued."

ON THE VALUE OF TONICS IN ASTHENIC DROPSY.

By R. S. Sisson, M.D., Cheltenham.

Whilst Dr. Handfield Jones's case of ascites, in The Lancet,* shows that some forms of dropsy are curable by tonics, and unaffected by diuretics, the following points out the fact, that others, though benefited by drugs of the latter description, require the former to complete a cure:—

Mrs.——, aged forty-five, has been ailing more or less for the last ten years, during which time she had been frequently under treatment with only temporary benefit. For the last three years she has had swelling of the face, abdomen, and legs. Catamenia had appeared only once in that time, and then in excess Has had an eruption on the skin, unaffected by treatment. For the last two years or more she has lived on slops, forced down without appetite. Has had frequent vomitings, with diarrhœa, blood being often passed with the stools.

May 16th.—Found her in bed, presenting the following symptoms:—Face much bloated; abdomen very protuberant; body generally anasarcous, with large dropsical swellings in depending parts; much emaciated in parts not concealed by effusion; patches of eczema on back of hands, feet, and front of legs; great dyspnœa; horizontal position intolerable; incessant cough, expectoration thin and frothy; complains of great pain in the chest; on percussion, marked dulness on the right side, over lower half of lungs posteriorly and anteriorly; loud crepitations; mucous râles; pulse 100, feeble; urine turbid, scanty, of dark-brown color, not coagulable by heat and nitric acid; stools liquid, dark, and offensive. To apply turpentine stupes to chest; chloride of mercury, three grains; powdered rhubarb, ten grains. To be followed by an aperient draught.

17th.—Ordered bitartrate of potass, one scruple; vinegar of squills, spirit of nitrous ether, of each ten minims; compound decoction of scoparium, two ounces, thrice a day; beef-tea, and half an ounce of brandy every four hours.

The patient improved most satisfactorily up to the 25th, when her husband summoned me in haste, stating that his wife was dying. I found her gasping for breath; pulse at the wrist scarcely perceptible; had complained of great pain in the chest. Apply turpentine stupes to the chest; hot bottles to the feet, and give one drachm of brandy. Nutrients more frequently; continue diuretic mixture and brandy.

29th.—The patient was delirious last night; got out of bed, and went into the adjoining room. This morning she is nervous and fidgety. Pulse 120, weak. Half an ounce of brandy every two hours; continue diuretic; twenty minims of tincture of opium at bed time.

30th.—Slept well last night; much improved; dropsy disappearing, except in face and legs; urine much increased, clear She called my attention to a swelling in the right iliac region, for which she had been previously under treatment. Now that the ascites was removed, I perceived a tumour in this situation, of the size of a large fist; painful; movable; outline distinct; fluctuation perceptible. As vaginal examination was objected to, I did not press it in her present state, intending, however, to do so at a future time. To apply six leeches, and fomentation.

June 1st.—Pain in iliac region removed. Apply six more leeches.

6th.—At this time all the more urgent symptoms had disappeared, but the legs became enormously distended, and covered with one mass of petechiæ. The catamenia reappeared; excessive and pale. Discontinue the diuretic mixture. The legs to be bandaged. Ten minims of tincture of muriate of iron thrice a day.

From this time the patient recovered most rapidly, the bloated cheeks, however, remained unchanged, showing that the cure was not yet complete. Ordered to bandage the face tightly with handkerchiefs, and to continue the iron. In a few days my patient had the satisfaction of seeing her face reduced to its normal proportions. The eczema entirely disappeared, and by the end of June, she had not only regained her strength, but stated that she never felt better in her life. I now pressed for an examination of the welling in the side, when she assured me, that after a minute examination, not a vestige remained.

Here was a case of acute pulmonary œdema, supervening on chronic ascites and general anasarca, in a patient debilitated by long disease and inability to take substantial food. Her history was most unpromising, her brother having died of dropsy, her mother dropsical, and a sister, about whom I have since been consulted, in the same state. To a young practitioner like myself, it may be supposed that the case was one of no little anxiety. But still, after a most minute examination, being satisfied that no organic disease existed, and believing in the wonderful power of drugs when properly employed, I predicted a perfect recovery. But when the ascites had disappeared, and my attention was called to the tumour in the iliac region, my favorable prognosis was shaken. Had I continued the routine practice with diuretics, not only should I have failed in effecting a cure, but I anticipated a return of all the symptoms which had disappeared. What diuretics failed in, iron accomplished, and has, I believe, rendered permanent a cure, which would otherwise have been of short duration. What would nature—what would the much-vaunted homœopathy have done in such a case? Allowed disease to have its sway, and hurry the poor patient with rapid and unerring strides to a premature and unnecessary death. Upon what pathological condition did the dropsical effusion in this case depend? Doubtless the more liquid portions of this greatly impoverished blood found a ready exit through the walls of the capillaries, relaxed from want of their proper stimulus—a healthy blood. The action of the iron is then obvious.

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* September No.—page 224.

And now comes the most important question. What was the tumour in the iliac region? Could it be ovarian dropsy? Such was my diagnosis. But we are told that the contents of an ovarian cyst are never absorbed. The vaginal walls, however, may give way, and the contents be discharged by that channel. Was the supposed return, then, of the catamenia on the 6th of June such a discharge? I think it possible; but as a vaginal examination was not made, a doubt may exist whether the tumour was ovarian at all. Here is a tumour dating from a miscarriage ten years ago, gradually rising out of the pelvic cavity towards the abdomen, increasing as it proceeds; at times painful; movable; with defined outline and perceptible fluctuation. I ask, if not an ovarian tumour, what was it?

The extracts I have made of this case seemed to me as few as were compatible with the right understanding of so important a subject.

August, 1860.

REPORT OF A

CASE OF FISSURE OF THE ANUS.

By W. P. Harris, M.D.,

Assistant-Surgeon, 15th Regt. Punjaub Infantry Pioneers.

The following account of a recent case of fissure of the anus which I have had under treatment has been transmitted by me in the belief that it contains points of practical interest to the profession at large.

J. B——, engineer, *Viscount Canning* transport steam ship, commenced to suffer from severe burning pain during defecation in the early part of March, 1860, during the stay of his ship in Calcutta. He is a square-built, dark-complexioned, healthy-looking man, and states that he has always enjoyed good health, but that, in consequence of disagreement with some of the other officers of the ship, he drank more than usual during his stay in Calcutta. No sooner had I taken medical charge of the ship, than he applied to me, stating that his sufferings were extreme, and that they had been increasing during the last three weeks. He had frequent calls to stool, passing small fæcal motions mixed with a little slimy-looking matter, attended with severe burning and aching pain; his appetite was bad, and his countenance expressive of much anxiety and suffering.

In the first place, satisfying myself of the absence of piles, and that most common East Indian disease, dysentery, I at once suspected the cause of the suffering, verifying my diagnosis by ocular and manual demonstrations, upon which I saw and felt a condition of disease of which, I believe, very little is known by many members of the profession, especially by the junior portion, for whose guidance this article is principally written. The only abnormal appearances of the diseased parts in which such intense suffering occurred were: a congested bluish appearance without swelling; no hardening of the skin, but a crack half an inch long behind the anus, looking like a simple clean incision in the skin; and, on examination by means of the finger introduced into the rectum, a slight roughening of the mucous membrane, in a circular form, was felt on the hinder part of the bowel just above the sphincter—an ulcer, from which, during defecation, matter was discharged, though not to any appreciable amount during the intervals.

Looking upon the etiology of the disease in this case to be congestion of the liver, and the cause of the pain to be stretching of the fissure and ulcer, as well as of the congested, highly sensitive venous structures about the anus, I adopted the following treatment:—I first relieved the venous system and congested state of the liver by means of one or two doses of mercurials, followed by small doses of saline purgatives continued for three days. During this period I applied locally to the parts, externally and internally, in the neighborhood of the anus, an astringent ointment, imagining that I might perhaps cure the disease thus, without the aid of the knife; but although a little relief was afforded,—partially I think, from the discontinuance of "Cockle's" pills, which he had been taking daily,—yet after the lapse of a couple of days the case became stationary, no progress towards cure continuing, and the aspect of my patient still denoting great anxiety and suffering. I therefore at once determined to use the knife. I inserted a probe-pointed bistoury, on the forefinger of the right hand, within the sphincter, cutting outwards to the extent of about a quarter of an inch, through the sphincter, during which I incised slightly both the ulcer and fissure.

The operation is so simple and comparatively painless, that no chloroform or manual assistance is required, nor need bleeding be feared.

After this little operation, I restrained the action of the bowels for a few days, keeping the incision open by means of tents daily applied. After the lapse of three or four days, his bowels acted without the least suffering, and the cure was completed by means of nitrate of silver ointment and constitutional remedies, within ten days.

My excuse for troubling the readers of The Lancet with a case of so common a disease as fissure of the anus is, that although a complaint attended by intense suffering and ready cure, the profession, and especially the junior portion of it, are not so alert at the detection of this malady as they are in the diagnosis of other classes of sickness.

Camp Rowloon, Hong Kong, 1860.

Longevity in a Lunatic.—James Coyle, a patient at St. Patrick's (Swift's) Hospital, Dublin, died on the 17th inst., in the 106th year of his age. He was admitted May 28th, 1802, in his forty-eighth year, and was for upwards of fifty-eight years an inmate of the institution.

A CLINICAL EXAMINATION.

OF THE

VALUE OF THE OPERATION OF TURNING IN LABOUR OBSTRUCTED THROUGH COARCTATION OF THE PELVIC BRIM.

By Robert Barnes, M.D.,

Fellow of the Royal College of Physicians, Vice-President of the Obstetrical Society of London, Assistant Obstetric Physician to the London Hospital, Physician to the Royal Maternity Charity, etc.

(*Continued from August No.*)

Contracted pelvis; failure of the forceps; child apparently dead; delivery by turning; child restored.

Case 4.—On the 8th of March last, my assistance was required by a midwife of the Royal Maternity Charity in a case of obstructed labour. The patient—aged twenty-six—had borne one child before; the labour had been very lingering, but the child lived. I found her at seven P.M. in labour at term. She was weakly and ill nourished; pulse feeble, and getting excited. She had been in labour twenty hours, the membranes had been ruptured eight hours, and it was represented that no progress of the head had been observed for five hours. The pains had flagged and ultimately failed nearly entirely. I found the head lying on the brim in the transverse diameter, forehead to right ilium. The feeble contractions of the uterus had no effect in driving it into the pelvis. The apposition of the parietal bones to the pubis and promontory was very close; the occiput filled the left half of the brim, and in the right half a small space was left by the frontal part of the head. The head was movable, and, pushing it a little up, I took the dimensions of the pelvis. The conjugate diameter barely exceeded 3·25″; the two sides of the brim seemed equal, so that the circumference of the brim was kidney-shaped. On withdrawing my hand, I found it soiled with meconium. The fœtal heart could not be heard. Believing that moderate extractile and compressing force would bring the head through, I endeavored to apply the Dublin forceps, but, owing to the shape and contraction of the pelvis, the instrument could not be made to lock. I introduced my left hand to turn. I passed this through the right half of the brim over the child's face. Laying my finger on the child's chest, I felt a pulsation, so feeble as to be almost doubtful as to its nature. Passing on, I felt the umbilical cord; there was no pulsation in it. I then seized the left knee. By upward counter-pressure effected by the right hand externally, pushing up the head, the leg was readily brought down. This being secured by a tape and held steadily, the evolution was completed by pushing up the head by the hand in the pelvis. The breech was soon born. The head was delayed at the brim; it entered in the transverse diameter, occiput to right ilium. By moderate force exerted for three minutes, pressure being maintained on the uterus externally, the head came through with a slight jerk. Whilst the head was in the brim, I felt a slight convulsive movement of the child's arm—the first sign of life. It was born breathless; not cyanosed; its limbs quite flaccid; no pulsation in the cord; a very feeble pulsation at the heart. At first, respiration was inexcitable. I kept up semi-rotatory movements for five minutes, with occasional cold aspersions over the area of distribution of the respiratory nerves. The heart began to beat rather tumultously; respirations, at first imperfect and at long intervals, occurred. Presently, on dipping the body into warm water, and quickly withdrawing it, the child cried. Taken to the fire, it soon cried strongly, and seemed safe. It showed no depression of the skull or distortion, and the caput succedaneum was very small. The child was a female, of full size; head of ordinary dimensions. The placenta was cast in ten minutes.

Commentary.—This case afforded me unusual satisfaction. It exhibits the superiority of turning over craniotomy in a new light. Here was a child saved, which, if auscultation and the escape of meconium had been relied upon as evidence of death, would, under the accepted doctrine, have had its head perforated. It may be urged that the child might have been delivered by natural pains stimulated by ergot. A first child had been born alive. But in women of defective organization, exposed to hardships of poverty and toil, it is not uncommon to find the parturient power exhausted by the first labour. I think it possible that energetic uterine contraction might have sufficed to drive the head through the pelvis. But uterine contraction, and, indeed, the woman's general strength, had long given way before the obstacle. Ergot might have failed to rouse them sufficiently, and would, in all probability, not have done so at all under a half an hour. Moreover, there was the risk of rupture of the uterus. My experience is not favorable to the attempt to lash the *exhausted* uterus into spasmodic energy by ergotic stimulation. That half hour would have been a period of protracted suffering to the mother, and destruction to the child. The long forceps might have been successful. I entertain a strong bias—a prejudice, perhaps—in favor of delivery head foremost. But the forceps could only have been applied in the transverse diameter of the brim, one blade over the forehead, the other over the occiput, or a little obliquely. The grasp under such circumstances would have had the effect of causing the bi-parietal diameter of the head to bulge out more strongly against the promontory and pubis, increasing the disproportion and difficulty. The operation would have been severe, and the risk to the child great.

I am satisfied that the delivery by turning was, in this case, the least distressing to the mother; admitting of being performed with greater ease and celerity than any other. And if we recognise the right of the child to a share in the appliances of Conservative Midwifery, then must this case be regarded as one of leading importance.

Finsbury-square, July, 1860.

INDUCTION OF PREMATURE LABOUR.

By Wm. Thorn, M.D.

Mrs. H——, a little woman, four feet six inches in height, has been pregnant six times. Craniotomy was performed at the full period by Dr. Babington in the first labour, by Dr. Blakely Brown in the second, and in the third by myself. I terminated the fourth prematurely at seven months, by rupturing the membranes and giving a dose of ergot of rye, but the child was born dead. This I considered due to the ergot, so in the fifth pregnancy I again at seven months brought on her labour by the hot and cold douche alternately applied, and by rupturing the membranes. The child was quickly born, but it only survived its birth six hours.

Thinking the plans followed wrong in some way, when the patient came under my care for her sixth pregnancy, I endeavored so to induce the necessary premature delivery that the process of natural labour in the well-formed female might, as it were, be imitated in its steady and gradual approach; for my idea was, that the deaths of the two previous children arose from their being too rapidly pressed through a narrow and deformed pelvis. I therefore proceeded upon a plan which I trusted might induce a steady termination of the labour. I carefully removed, at about the seventh month, perhaps a week earlier, the plug from the os uteri, so inducing a slight show. I then gave, what I know to be a capital emmenagogue—viz, half a drachm of the biborate of soda, three times daily. At the end of sixteen days, no other action being perceptible except some slight uterine pains now and then, *the membranes ruptured spontaneously*, and the patient was easily delivered of a healthy male child, likely in every sense to do well.

The only remarks I would make are, that I believe the satisfactory termination of the labour, and the safety of the child, are entirely due to the very gradual induction of the delivery, and I must say that the borate of soda has fully answered my expectations in this respect.

Harrow-road, August, 1860.

OF THE
NATURE & TREATMENT OF DEFORMITIES.

By Holmes Coote, F.R.C.S.,

Assistant-Surgeon to St. Bartholomew's and to the Royal Orthopædic Hospitals.

(Continued from May No., p. 400.)

NON-CONGENITAL DEFORMITIES.

In passing from the consideration of congenital to non-congenital deformities, we leave the theories of fœtal development, or intra-uterine accidents, and enter on the domain of more recognised surgery.

I cannot select a better opportunity than the present for regretting that the term "orthopædic" should ever have been introduced in connexion with this department of surgery, for it conveys an idea of exclusiveness to which there is no claim, and raises in the mind of the student an ideal barrier, against which it offers a protest.

In the treatment of non-congenital deformities, orthopædic surgery shows only what may be done by time, patience, and gentleness, aided by mechanical appliances, or proper surgical treatment, after disease, accident, or general debility have done their worst. It claims not to be a specialty, except in so far that it requires some study and examination. But I may warn those entering upon practice that the whole subject is not to be "grasped" in a moment. It comprises a study of the morbid conditions of all the great systems of the body.

On the 24th of February, I saw a little child, aged four years, at the Orthopædic Hospital, of whom the mother simply stated that the left foot turned inwards in walking. And such was the case. The foot turned inwards, the inner border being raised, and the boy complaining, after walking, of pain in the sole of the foot at the junction of the metatarsal bones with the phalanges. But when he was put on a sofa the foot could be moved freely in every direction. It was only after most careful examination and comparison that a slight degree of tension of the tendo-Achillis was detected. The left limb was somewhat smaller than the right.

Now what was the explanation of this case? The child was suffering from one of those obscure affections of the spinal cord which manifest themselves by disturbing muscular equilibrium. This or that set of muscles exercises undue force, and the weight of the body is irregularly transmitted to the ground. In the case now before us, there was incipient contraction of the muscles of the calf, causing a tightness of the tendo-Achillis. It was not sufficient to be detected by cursory examination, and was more easily recognised by its results; what were they? In stepping forwards, the child pressed, with undue force, in consequence of the tense state of the tendo-Achillis, the anterior part of the corresponding foot against the ground; from this cause pain ensued, and the boy instinctively turned the inner border of the foot upwards and inwards, thus walking on the outer side. The next consideration was the seat of disease, which was certainly not the foot; and attention was directed to the spinal cord, as well as to the mouth, where the important process of dentition was yet going on, and exerting an influence over the whole system.

Some months ago, an aged gentleman consulted me in consequence of a tight condition of the tendo-Achillis, by which the weight of the body was thrown unduly forwards, and corns were formed, to his great annoyance, on the anterior and under part of the foot. In early or middle life, such an occurrence may be rectified by the division and elongation of the tendo-Achillis; in the aged, it may be alleviated by proper baths, and by processes of manipulation, by means of which the thickened epithelium is removed.

But disease or accident may be yet more local, and confined to a single articulation. Who does not still remember the frequent condemnation of diseased joints, and their subsequent amputation? Surgery has made a bold step in attempting the preservation of the limb by resection of the diseased joint. Nevertheless, we have yet to learn how much may be done by time and patience on the surgeon's part; how limited may be the real issue of disease, how capable parts so changed are of restoration.

I have three young patients under my charge suffering from strumous disease of the ankle-joint and tarsus. In the one case the heel is drawn up in the position of talipes equinus; in the second, the foot is thrown outwards in the position of talipes valgus; and in the third, the integuments over the tarsus are red, inflamed and suppurating. In order to treat these deformities, a general knowledge of the principles of surgery is required. Active disease must cease before we attempt the restoration of the displaced parts. The foot is drawn inwards or outwards instinctively, and for the patient's ease; and the division of tendons would be unscientific and reprehensible.

So, likewise, in cases of contraction of the knee-joint during disease, the division of the flexor tendons of the ham is a proceeding both unscientific and futile. Why is the knee bent? To relax the ligaments which hold together firmly pressed the inflamed articular extremities of the bones. What would be effected by the subcutaneous division of the flexor tendons? Either absolutely nothing, or else to render the limb more unsteady and likely to reapproximate the diseased surfaces. It is a rule in orthopædic surgery to let morbid processes cease before we attempt the readjustment of displaced parts.

Faulty position may become the cause of non-congenital deformity; and this cannot be better illustrated than by reference to diseases of the spine. Lateral curvature! how often do we see it; how rarely is it mentioned! The very subject may be said to falter at the portal of legitimate surgery, in spite of the immense amount of misery which this affection is yearly causing.

Let me mention the following case, the particulars of which may be verified by anyone who chooses to call at the Royal Orthopædic Hospital, where the patient still remains:—

A young woman, the daughter of a professional man, became affected with double lateral curvature of the spine, after being left destitute. She was ultimately removed to a workhouse, where she remained bedridden and paraplegic for seven years. She was admitted into the Orthopædic Hospital above twelve months ago, under the care of Mr. Tamplin, by whose directions proper appliances were fitted to the distorted spine, and the limbs, which were contracted, were slowly extended. The patient can now walk, even some distance, by herself, and finds herself daily becoming stronger.

The treatment of non-congenital deformities implies, then, an extensive knowledge of the general principles of medicine, and proves clearly how impossible it would be to establish orthopædic surgery on the basis of a specialism.

Bridge-street, Blackfriars, 1860.

Social and Sanitary Science.—The next meeting of the International Statistical Congress will be held in Berlin, probably at the end either of two or three years.

OBSERVATIONS
ON SOME
RARE SURGICAL ACCIDENTS.

By Weeden Cooke, Esq., M.R.C.S.,

Surgeon to the Royal Free Hospital and to the Cancer Hospital.

A Case of Cut-Throat,

With Division of the Larynx and Pharynx,

and in which an excellent recovery ensued, is a sufficiently rare incident to be instructive, as well as interesting, to medical men in all positions. It is one of those occurrences which may suddenly come upon any one of us, and require at the instant a concentration of all our knowledge and all our ingenuity. The boldness, not of instinct, but of instruction, is requisite to stanch the ebbing life; and in this instance, as in many connected with our noble profession, it is the *premier pas qui coute.*

Looking from a medico-legal point of view, in the first instance, at the case I am about to relate, it will be found not unworthy of careful study and observation. It is not a very uncommon circumstance that the question of suicide or murder has to be decided in great measure by the evidence of the surgeon who is called to a case of cut-throat. As a rule, no doubt there are extraneous circumstances which help him to a just conclusion; but since these can be, and are, also taken into account by the jury, it behoves the professional witness, whose opinion is sought as an expert in the matter, to put himself in the position of being able, from the nature of the wound itself, to demonstrate clearly, to the satisfaction of the judge, the bar, and the jury, whether the wound in question be self-inflicted, or the result of a murderous attack. From a careful review of the cases which have come under my notice at the Royal Free Hospital during the last fifteen years, I derive the conclusion, that in all instances of attempted suicide the wound inflicted has been either just beneath or above the os hyoides; and that in cases of attempted murder the injury has been much lower down in the throat, generally beneath the pomum Adami. The reason of this is very manifest. The suicidal act is one of much physical as well as mental excitement. The individual throws back his head with great resolve, and the knife is naturally carried across the throat as near to the chin as may be. This throwing back of the head is not obtained by the murderer, and he is obliged to carry out his purpose with the chin much overlapping the laryngeal region. These positions will also account for another distinguishing circumstance—viz., the division of the carotid artery or arteries by the murderer, and their escape from injury in the greater number of instances of attempted self-slaughter. In the former case, these arteries, running as they do close upon the side of the trachea, in the middle of the neck, are almost necessarily implicated in the incision; whilst in the latter case, where the wound is inflicted just above or below the os hyoides, the carotids have bifurcated and somewhat retired towards the angle of the lower jaw, and so escape injury. In the cases of attempted murder that I have seen, the wounds have been superficial, as well as in the middle of the neck. If they had penetrated the trachea, it is not likely that in this situation the carotids would have escaped. The superficial wounds in this region which result from self-infliction are generally the effects of drunken brawls, or of a pretence to suicide as a means of extortion or exciting sympathy. The maniacal suicide invariably acts with greater determination, and succeeds in dividing the larynx at least, if not the pharynx also. The division of both windpipe and gullet, without injury to the carotids, is, however, a rare circumstance, and it is on account of this rarity and its instructive features that I venture to record the following history of a case of this nature which has recently been under my care:—

W. J——, aged twenty-one, a very well-made, rather stout young man, had a twelvemonth ago an attack of fever, accompanied with delirium, which lasted several days. On his recovery he married and entered into business. He was of an anxious disposition, and business matters excited him, but nothing particular occurred until a few days before his wife was confined, when he became extremely depressed, so much so as to excite the attention of the medical attendant of the family. He was carefully watched, and medicine administered, but he managed, nevertheless, on the night of April 2nd, to cut his throat with a carving-knife. Considerable hæmorrhage ensued, but was controlled by the medical men called in, and he was then carried to the Royal Free Hospital in a sinking state.

No bleeding of any consequence took place after his admission. He was put to bed, and an opiate enema administered. Upon my arrival at the hospital, I found him very blanched, and the pulse scarcely perceptible. The wound extended from the right side of the larynx across the throat to within half an inch of the lower jaw on the left side. The incision took effect between the os hyoides and the thyroid cartilage—in fact, through the thyro-hyoidean membrane which connects these two bodies, about an inch above the pomum Adami. The lower attachment of the epiglottis by the thyro-epiglottic ligament to the thyroid cartilage was severed, and it therefore remained attached by its hyo-epiglottic ligament to the os hyoides above, so that the opening of the glottis was quite undefended in the efforts at deglutition until reunion was effected. Passing through the posterior wall of the larynx, the incision extended through the anterior wall and sides of the pharynx, so that the back of the pharynx lying upon the cervical vertebræ was fully exposed. The patient was quite tranquil and essayed to speak, but the separation of the larynx from the mouth of course prevented the utterance of the sounds which the lips and tongue endeavored to express. I diminished the wound by two sutures on the left side, leaving the fore part open for the escape of mucus, and the purulent discharge which was to be expected. The head was bent upon the chest by means of pillows, to keep the wound in apposition; and as he was very tractable and anxious to get well, I did not find it necessary to bandage the head to the chest—a most irritating and uncomfortable proceeding. A pint of strong beef-tea with an ounce of brandy was injected into the rectum every three hours. The room was kept warm, and, as a precaution, a male attendant sat constantly by his side.

Except an irritating cough, which was due to the increased bronchial secretion, the patient progressed favorably and without change for the first three days. Then he began to sip small quantities of egg and port wine, some of which passed into his stomach, but some also escaped by the wound. The enemas were assiduously continued. There was thirst, and a great longing for food by the mouth.

On the sixth day no air passed out of or into the wound, and small quantities of egg and port wine were swallowed without escape. The voice was still extremely feeble and there was much purulent discharge, with an irritating cough, which was relieved by small doses of laudanum.

On the eleventh day, the voice had recovered its natural power; he partook freely of beef-tea, port wine, and beer by the mouth; and the external wound was beginning to unite at its extremities. A few days after this, he began to take meat—panada, fish and light puddings. A tonic also was ordered, as he continued very weak and anæmic. In one month he was able to go home, the wound being healed, with the exception of a few exuberant granulations; and he soon afterwards went to the seaside to recruit his strength. Owing to the cicatrization of the wound, the head was somewhat bent upon the chest; but gradually the new tissue will, no doubt, be elongated, and the head will recover its erect position.

Beyond the medico-legal value of this case, it has its surgical teachings. It will be observed that, contrary to the instructions of some authors, and certainly in opposition to the popular notions, the throat was not "sewn up." The two sutures that were put in had the effect of lessening the skin wound only; but even these were of no avail, for the healing there did not take place by the first intention, but by subsequent granulation. Had the wound been closed entirely by sutures, the purulent discharge would undoubtedly have passed into the larynx and killed the patient, as would also any particle of food that may have been taken before the wound in the pharynx was closed. Mr. Liston relates the case of a girl, whose throat was sewn up according to the then custom, and who was only saved from suffocation by a timely release of the sutures. Although this eminently practical surgeon entered a fierce protest against the use of sutures in these cases, I believe that it has not been sufficiently attended to; and that, both in books and actual practice, the contrary proceeding is still advised and carried out. It may be that in some instances the position of the head requisite to obtain union will not be so easily maintained as in the case above recorded. My experience, however, teaches me that the large loss of blood which necessarily ensues from the division of the superior thyroid and superior laryngeal arteries almost invariably subdues the most violent maniac, and that he submits himself calmly to all the means employed for his restoration. If there be restlessness, however, the patient may be made to wear a nightcap with a piece of elastic webbing attached to each side, this being carried down and fastened to a waist-belt or bandage. Lastly, the method of feeding the patient is a matter of such practical importance that his life may be said to depend upon the plan adopted. There are four means of administering food to a patient whose pharynx is opened, a tube being used in all. This instrument has been passed into the œsophagus through the wound, by the mouth, and up the nostril. The fourth mode of sustaining the patient until the division of the pharynx is healed is by injecting the rectum. The obvious advantage of the latter proceeding is, that the act of swallowing, which necessarily disturbs the parts, is avoided altogether; whilst it will readily be conceded that the irritation set up in the fauces by the presence of the instrument, even if used in the least objectionable manner—namely, by the nostril—must be sufficient to interfere very injuriously with the process of reparation. It would be scarcely possible to conceive any surgeon passing the tube in through the wound, were it not that instances of this proceeding are on record; and the consequence has been, that no union was effected until the edges of the parts were vivified by the knife and brought into contact by position. As after laryngotomy and tracheotomy the wound has upon rare occasions left a fistulous opening, so is it recorded that the same circumstance has followed a cut-throat. The plan of covering the opening with a small piece of skin from the neck appears to be a simple and successful mode of completing the final cure. The duty of restraining the first hæmorrhage in this case did not come under my notice; but I think it may be suggested, in conclusion, that no surgeon should ever be without a solution of the perchloride of iron. Its styptic power is so remarkable that I have myself stopped the hæmorrhage from a wound of the profunda femoris by its aid; and do not doubt that, with a pledget of lint saturated with this fluid and by pressure, even a wound of the carotid may be sufficiently controlled to give time for operative procedures.

Upper Berkeley-street, July, 1860.

Medical Societies.

AUGUST—SEPTEMBER.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

F. C. Skey, F.R.S., President.

OBSERVATIONS ON THE MORBID ANATOMY, PATHOLOGY, AND DETERMINING CAUSE OF EMPHYSEMA OF THE LUNGS.

BY A. T. H. WATERS, M.R.C.P.,

Physician to the Northern Hospital, Liverpool.

(*Communicated by* Dr. Ogle.)

Although much has been written on the subject of pulmonary emphysema, there are yet many points in connexion with it which require investigation. There is perhaps no disease the symptoms and physical signs of which are so readily explicable, from a knowledge of the structural changes by which it is accompanied, as this particular affection, and hence an acquaintance with the minute anatomy of the healthy lung tissue becomes of the utmost importance, in order fully to appreciate the morbid changes which take place.

(Here follows a brief description of the arrangement of the "ultimate pulmonary tissue.")

Pulmonary emphysema is of two kinds—1. Interlobular emphysema. 2. Vesicular emphysema. The second, or vesicular, is by far the most important, and will alone be considered. It exists in three forms, differing only in the extent to which they involve the lung.

1. *Partial Lobular Emphysema*, involving a few air sacs, or at most only a single lobulette. This is not often seen as an independent affection; but in lungs which are the seat of the second form it occasionally exists in small patches along the margins of the lobes. These patches resemble small vesicles, and when numerous have somewhat the appearance of a row of beads.

2. *Lobular Emphysema.*—This is the form most frequently met with. It involves one or more lobules in different parts of the lung, and is especially found along the margins of the base, the anterior border, and at the apex. It frequently exists in connexion with phthisis, and occasionally with pneumonia. In this form it is easy to trace the divisions of the lung; the boundary walls of the lobules have not usually given way, and generally no interlobular emphysema exists. The air-sacs of a lobule are not necessarily all equally dilated, those at the circumference being most so. The emphysematous lobules may be seen projecting above the level of the lung, and in some instances they become developed into "appendages."

3. *Lobar Emphysema.*—This form involves the whole of a lobe, or an entire lung, or very frequently both lungs. It constitutes a very formidable affection, and often destroys life at an early period. The lung is much increased in size. The outlines of the lobules frequently cannot be distinctly seen, in consequence of the rupture of their boundary walls, and the production of interlobular emphysema.

In investigating the morbid anatomy of emphysematous lungs, the same methods of preparation were used by the author as had been previously employed in the examination of the healthy organ—viz., injection, inflation, and desiccation.

With regard to the structural changes which take place in the disease, we recognise, in the early stages, a simple dilatation of the air-sacs, and a diminution in the height of the alveolar partitions. A further dilatation takes place, with more or less complete obliteration of the alveolar septa. This distension produces a divergence of the elastic fibres of the air-sacs, and is soon followed by a perforation of the walls themselves so as to give in the advanced stage a perfectly cribriform appearance to the membrane of which the walls are formed. This is followed by rupture of the elastic fibres, a further distension of the air-sacs, with a general breaking down of their walls, so that in the most advanced stages of the disease large cavities are found, traversed in all directions by membranous shreds or fibrous cords. The inner surface of the emphysematous lung tissue prosents the same microscopic appearances as that of the healthy tissue.

In some lungs in which lobular emphysema existed, the air-sacs were found much distended, but no perforations existed; whilst in others, and especially where the disease was of the lobar kind, extensive perforations were found, with not more, and in some instances less, dilatation than in the former. This would seem to indicate some degeneration of tissue in the one case, which might be absent in the other.

The condition of the bloodvessels explains the anæmic appearance of the emphysematous lung. In the earlier stages, the capillaries of the pulmonary plexus are wider apart than in health; and as the walls of the air-sacs are perforated, and the latter more distended, the capillaries become ruptured and absorbed. The vascularity of the lung, in a condition of advanced emphysema, is very slight.

The bronchial tubes are usually dilated in old standing cases of emphysema, their mucous membrane is pale, and there is increased development of the circular muscular fibres.

An important question in connection with emphysema is, whether the disease is preceded by, or attended with, any degeneration of tissue.

With regard to the existence of fatty matter in the emphysematous lung, a considerable number of specimens were examined with great care; and although in one or two instances indications of its presence were found, as a rule it was entirely absent. Dr. Jenner has stated that a fibrous degeneration frequently exists. A number of specimens were examined to ascertain whether any alteration of this kind could be observed in the elastic fibres, as compared with those of the healthy lung. The results arrived at on this point were imperfect, and the question is left for future investigation. Some kind of degeneration is believed in many cases to exist.

With reference to the determining cause of pulmonary emphysema, the view that the disease is produced by expiratory efforts appears to the author the most tenable.

Serious objections seem to present themselves to the theory advocated by Dr. Gairdner, that the disease results from increased distension, during inspiration, of one part of the lung, in order to fill the space previously occupied by a collapsed portion.

During inspiration, the chest expands to make room for the dilating lung; air is drawn equally to all parts of the lung, and is not driven by any external force to one part more than to another. It is difficult, therefore, to understand how an excessive quantity of air should find its way to any particular portion. If the chest must reach a certain expansion it would rather appear that the entire lung would be everywhere slightly dilated, except where collapsed; or else that those parts nearest the collapsed portions would be most distended. Such parts, however, are not the most frequent seats of emphysema. Further, the lungs can undergo very considerable distension without suffering any injury. Although the lungs undergo equable pressure during ordinary expiration, this by no means proves that such is the case during acts of coughing; in fact, the contrary is true, as has been shown by Dr. Jenner.

The conformation of the walls of the chest, and of the lungs, seems to render it necessary that the latter should undergo unequal compression during violent expiratory efforts with a partially closed glottis, and that air should be driven first to those parts of the lungs where the walls are least resisting, and secondly to those portions which contain the least volume of air. The least resisting part of the thoracic walls is that which covers the apex of the lung; it consists of a membranous expansion, and plays no active part in the expiratory process. As a fact, we find, in coughing, that the lung bulges into the lower part of the neck. The parts of the lung which contain the least volume of air are the margins. These are out of the direct line of pressure which the lung undergoes in violent expiratory efforts, which are chiefly effected by the abdominal muscles, especially the recti. The contraction of these latter muscles, forcing upwards the abdominal viscera and the diaphragm, produces the greatest amount of compression at the base of each lung: the air is driven upwards in a strong current, which overcomes the current from the other portions, and these, instead of becoming emptied, remain forcibly distended.

The phenomena witnessed in M. Groux, probably seen by many of the Fellows present, may be adduced in support of the view that during coughing the lungs become distended in any part where the walls of the chest offer but little resistance.

Lastly, the cases recorded in a paper written by M. Guillot—in which what he describes as sub-pleural emphysema was found after death, preceded by long-continued and violent spasmodic cough—may be cited in favor of the expiratory theory of the production of the disease, a theory to which anatomical arrangement and physiological phenomena seem to point.

ON A CASE OF BRONZED SKIN CONNECTED WITH DISEASE OF THE SUPRA-RENAL CAPSULES.

BY C. J. B. ALDIS, M.D., F.R.C.P.

Robert B——, aged twelve, was admitted under the author's care as a patient at the Surrey Dispensary on March 29th, 1859, with the following symptoms. The body generally, was of a dark-olive color and the pulse feeble, with occasional vomiting, pain in the back, languor, and disposition to lie down. The eyes were sunken, and the conjunctivæ pearly white.

The illness commenced about four months previously, at which period he was in very good condition. This discoloration of the skin had been noticed during two months; soon afterwards the urine began to dribble away, and loss of flesh supervened, with extreme prostration. The author, believing the complaint to be that mentioned above, placed the patient under Dr. Addison's care, at Guy's Hospital, on Aug. 17th, who confirmed the diagnosis made before he entered that institution.

The complaint having proved fatal on Aug. 20th, 1859, Dr. Wilks, who took much interest in the case, kindly sent an account of the post-mortem examination to the author. A model was made of the diseased organs. The body, spare and universally tinged of a brown hue, presented no disease internally, excepting in the supra-renal capsules, which were converted into a tough yellow matter, their original tissue having entirely disappeared.

REPORT OF CASES ILLUSTRATING THE USE OF FORCEPS IN EXTRACTION OF CATARACT.

BY JOHN F. FRANCE, ESQ., F.R.C.S.

Ophthalmic Surgeon to Guy's Hospital.

The object of the present report is to illustrate the advantage obtained by employing forceps, in addition to the ordinary means of fixing the globe, in extraction. The author, after glancing at the need felt for some such auxiliary from the earliest introduction of this operation to the present time, as proved in a former communication on the subject in "Guy's Hospital Reports," pointed out the casualties to which defective command of the globe is apt to give rise—viz., premature escape of the aqueous humor, faulty section of the cornea, injury to the iris, loss of vitreous humour; and, in short, from various sources, jeopardy to the ultimate issue. He then briefly explained the mode of using forceps for the purpose in view; and, having noticed the complete command of the eye obtained by this means, proceeded to a condensed recital of twenty-one cases not hitherto published, exhibiting the practical working of his suggestion. These examples comprised every one, without exception, in which the author had performed extraction, from the date of his previous publication to that of the twenty-first case: and, in collating them with the former series, he showed the infrequency of the accidents above adverted to and the high average of success under the plan recommended. The author claimed weight for the extended evidence thus yielded by a catena of forty one examples, affording as they do the strongest testimony in favor of the method of operating in question; and, in conclusion, quoted the report of Dr. Steventon, of Cheadle, who speaks highly of the advantage he had himself derived from adopting this method, and acknowledges the increased success he had met with since doing so.

TABULAR STATEMENT OF SEVENTY-TWO CASES OF HÆMATEMESIS, WITH REMARKS.

BY C. HANDFIELD JONES, M.B., F.R.S.,

Physician to St. Mary's Hospital.

(*Communicated by* A. BENCE JONES, M.D., F.R.S.)

The author stated that the seventy-two cases of hæmatemesis contained in the table are all that have been met with amongst 2500 selected cases of all kinds, and about 10,000 (speaking roughly) of all cases occurring in ordinary medical practice. The chief practical points which a perusal of these cases suggests are—1. The number of cases met with in which the existence of gastric ulceration is a matter of great uncertainty, and in which one cannot avoid asking oneself whether the hæmorrhage may not be simply analogous to common epistaxis. That this is possible, even when the hæmorrhage is copious, is shown by the record of a case given by Dr. Brittan. 2. The number of cases all in which complaint of dyspepsia was either absent or so slight that it would have been impossible to distinguish it from that attendant on gastric catarrh, gastralgia, or gastric debility. 3. The great benefit of a tonic plan of treatment steadily carried out.

The paper was accompanied by a table in which are recorded, for each of the seventy-two cases, the age and sex of the individual, the period at which hæmatemesis occurred, any important events prior to the attack, the symptoms observed at the time, and the treatment of the case, with its result.

CONTRIBUTION TO THE STUDY OF SPIROMETRY.

BY T. GRAHAM BALFOUR, M.D., F.R.S.

The author's investigations confirm the observations on the vital capacity of the lungs in Mr. Hutchinson's paper, read to the Society in 1846. He gives the results of the measurements, by the spirometer, of the recruits, 1126 in number, enlisted into the Grenadier Guards between October, 1848, and March, 1853, with the mortality and invaliding amongst them from the dates of their enlistment till the end of March, 1854.

After certain corrections pointed out by the author as necessary to render a comparison accurate, the results of the measurements in the Guards are almost identical with those made by Mr. Hutchinson, as will be seen by the following summary showing the average "vital capacity:" of men of different heights

		Height of Grenadier Guards.				
		5ft. 8in.	5ft. 9in.	5ft. 10in.	5ft. 11in.	6ft.
Vital capacity	Balfour ..	231·5	239·8	245·6	251·5	258·9
	Hutchinson	231·5	240·5	245·5	252·0	258·8

The author observes that the identity of these results is very remarkable, and may fairly be accepted as evidence of their accuracy.

He next examines the question whether a low vital capacity may be taken as an indication either of a tendency to pulmonary disease, or of a feeble constitution, rendering the individuals liable to a high rate of mortality. To test this, the men have been divided into three classes, according to the extent of their vital capacity, and the mortality in each class has been traced. The results show a most remarkable coincidence in the mortality of the three classes, the difference amounting only to 0·6 per 1000, in favor of men having a vital capacity above the average. But a different result was obtained in regard to the men discharged as invalids, the number who became non-effective being much greater amongst those having a vital capacity below the average than in the other two classes.

The author next discusses the value of the spirometer in the selection of recruits, as indicating the men having a tendency to pulmonary disease, and points out the necessity, in such an investigation, of including the total loss arising from consumption, both by death and invaliding. The tables and calculations submitted showed that this loss is much greater amongst the men having a vital capacity below the average than among those of a capacity equal to or above the average. From the results obtained the author concludes that a vital capacity below the average may be considered rather as indicating a generally feeble organization, less capable of resisting the deteriorating influences to which a soldier is exposed, than as evidence that a definitive relation exists between the vital capacity and a tendency to pulmonary consumption. Although this conclusion would seem to justify the opinion that the spirometer might be advantageously employed in testing the fitness of recruits, the author points out practical objections to it which appear insurmountable; but he admits that it might be useful as an indication to the inspecting officer of the necessity for a careful examination by the stethoscope in cases of a very low vital capacity amongst men coming forward for enlistment. Finally, he concurs in the views expressed by Mr. Hutchinson of the practical value of the spirometer to the medical referees of Life Assurance Societies.

ON THE RELATIVE AMOUNT OF SUGAR AND UREA IN THE URINE IN DIABETES MELLITUS.

BY SYDNEY RINGER,

Late Physician's Assistant at University College Hospital.

(*Communicated by* RICHARD QUAIN, F.R.S.)

Two cases, patients in University College Hospital, under the care of Dr. Parkes, are given, in which the observations were made hourly over a considerable period, thus enabling the sugar and urea to be compared, under various circumstances, with greater accuracy. The following are the conclusions at which the author has arrived:—

1st. That after the influence of food on the urine has entirely disappeared, a constant ratio is maintained between the sugar and the urea.

2nd. That after a purely non-amylaceous and non saccharine meal, both the sugar and the urea are increased, but that during this increase the same ratio between them is observed. This ratio is 1 of urea to 2·2 of sugar.

3rd. That under both these circumstances the sugar could only be derived from the nitrogenous elements of the body, and, therefore, that some such a ratio might on *a priori* grounds have been expected.

The author next shows that after saccharine food has been taken, the sugar in the urine, as is well known, is increased, but that this increase of the sugar is accompanied by a decided increase in the amount of urea. Thus the sugar must cause a consumption of nitrogenous matter, probably resolving it into sugar and urea. Various kinds of sugar were given, each of which caused an increase in the amount of urea, though whether one kind more so than another is not shown. These facts are sufficient to explain the cause of the loss of flesh in diabetic patients. The author next shows that the amount of urea excreted in proportion to the amount of sugar taken in as food varies in different patients, and in the same patients at different times; and that the severity of the symptoms is in proportion to the amount of urea eliminated through the influence of the sugar, whilst no relation necessarily exists between the amount of sugar excreted and the severity of the symptoms; indeed, as is well known, the quantity of sugar in the urine may greatly rise in amount with the improvement of the patient. The method of arriving at the influence of an ordinary mixed diet is to ascertain the ratio between the urinary sugar and the urea; at least this method is sufficient in comparing various days together, provided the diet on these days be tolerably similar; for he states, it is possible to conceive that though the amount of amylaceous matter may cause a much smaller quantity of urea to be eliminated, yet by increasing the former in the meal, the latter may be maintained at the same amount, or even increased, but a more nitrogenous matter would have been taken in with the amylaceous; the proportion of the former consumed would be much less, and consequently there would be more left to nourish the tissues. From this he thinks it is evident that the ratio must be obtained; for as most, if not all, the sugar generally passes off, it can be taken as a fair guide to the extent of the meal. This will explain those cases in which the improvement of the patient is accompanied with a decided increase in the amount of urinary sugar. The author shows, from the above cases coupled with two others Dr. Garrod allowed him to take, that a ratio of 1 to 4 of urea to sugar is rapidly fatal; that life can be prolonged with a ratio of 1 to 8, whilst a somewhat rapid improvement is compatible with a ratio of 1 to 15. He next states that as the increase of the urea after a meal in health is probably due to the same cause as the increase under the same circumstances in diabetic patients, and as the sugar rises with it, maintaining the usual ratio, (after a non-amylaceous meal,) showing that they both come from the same source, if it can be further pointed out to what this increase in the sugar is due, it will explain the rise in the urea in health. After stating that it is possible that it may come from two sources, that it may be either due to some organ endowed with this function, which in diabetes is altered, or be the product of the retrograde metamorphosis of the tissue, he advances arguments to show that in these cases the sugar is due to the former, probably the liver. He thence concludes that the ordinary rise in the urea in health after a meal, is due to that organ, which, in diabetes, produces a less highly elaborated sugar, the urea passing off unconsumed with the sugar. The author concludes his paper with a few facts of lesser importance, showing that the sugar, after a mixed diet, reaches its maximum in the early stage of the disease, during the third or fourth hour; whilst later, the maximum is not arrived at till the sixth hour. That after taking sugar in solution, the maximum is reached during the second hour. That the duration of the influence is longer later in the disease than at an earlier period: thus, at the commencement of the disease, the influence was lost in nine hours, whilst later in the disease it still continued after fifteen hours had elapsed. He also shows that the urea has a tendency to pass off earlier than the sugar, probably because it is more pernicious. Lastly, charts are given, showing the elevation of the temperature on several occasions after meals.

OBSERVATIONS ON THE INTERMITTENT FEVERS OF THE WEST INDIES, AND ON THE ACTION OF QUINIA AS A SPECIFIC IN THEIR TREATMENT.

BY HUGH CROSKERY, ESQ., L.R.C.S.I.,

Late Assistant-Surgeon, R.N.

(Communicated by A. W. Barclay, M.D.)

The object of the author in this communication was to point out the necessity of a sedative treatment during the hot stage, and free purgation before the administration of the specific. The mixture he had found most beneficial was composed as follows: —Solution of acetate of ammonia, two ounces; spirit of nitrous ether, and spirit of juniper, of each half an ounce; potassio-tartrate of antimony, four grains; tincture of hyoscyamus, two drachms; tincture of opium, one drachm; twelve ounces of camphor mixture. Of this a tablespoonful is given to an adult every half-hour until diaphoresis comes on. The mixture may be either preceded or followed by ten grains of calomel, with a saline aperient a few hours later. He considered that the action of the mercurial purgative tended to assist the subsequent action of the quinia. He condemned the administration of quinine in large doses, and stated that he had obtained the most satisfactory results from its employment in small doses at repeated intervals. He believed that to administer it in any form during the paroxysm was injurious, and that the exhibition of large doses at this period of the disease was fraught with the greatest danger. The formula adopted by the author for its administration is the following:— Disulphate of quinia, forty grains; tincture of oranges, half an ounce; dilute sulphuric acid, one drachm; to ten ounces of water. Of this mixture he gives to an adult a tablespoonful every hour during the intermission until singing in the ears or the presence of headache shows that the system is saturated by the remedy, when it is to be repeated at longer intervals, and even continued in small quantity for some days, so long as any unpleasant feelings are experienced at the time when the paroxysm ought to occur. He has found that in this manner from forty to sixty grains may be given before the recurrence of the attack, and that in the majority of instances the the next paroxysm is either entirely prevented or is very much modified. One large dose o the salt very often produces disagreeable head symptoms, which prevent its repetition so as to get the system saturated with the remedy sufficiently early to obviate the return of the hot stage. In cases of severe quotidian he had occasionally given with benefit ten grains of quinine at once, along with the calomel; this, however, he considered rather as the exception. The paper concluded with the narration of five cases illustrative of the author's method of treatment. Of these cases, four were adults, and one a child nine years of age. In most of these the attack was quite recent, but one case it had continued six weeks. The author remarked that in such circumstances the prolonged use of quinine during convalescence was essential to ultimate recovery.

ACCOUNT OF THE RE-DISSECTION OF A PREPARATION OF TUBAL GESTATION WHICH WAS PRESERVED AND DESCRIBED BY THE LATE DR JOHN CLARKE.

BY T. HOLMES, M.A. CANTAB.,

Curator of the Museum of St. George's Hospital, and Assistant-Surgeon to the Hospital for Sick Children.

The paper describes a recent dissection made of a case of tubal gestation which was described and figured by Dr. John Clarke in the "Transactions of a Society for the Improvement of Medical and Chirurgical Knowledge," in the year 1793. Dr. John Clarke's description pointed out only two membranes —the amnion and chorion—around the ovum in the tube. The principal object of this paper is to call attention to the existence of another membrane, external to ~~the~~ chorion, separable into two layers, and not forming part of the wall of the tube. The paper was accompanied by the original preparation, and a careful drawing of it in its present state.

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HARVEIAN SOCIETY.

Mr. Henry Thompson, President.

Dr. H. W. Fuller read a paper on the

SUCCESSFUL TREATMENT OF WHOOPING COUGH BY INCREASING DOSES OF SULPHATE OF ZINC AND EXTRACT OF BELLADONNA.

The author commenced his paper by calling attention to the commonly received opinion, as stated in most books on the subject, that "whooping-cough must run a certain course." He combated this opinion by reference to the results of his own experience, and then proceeded to point out the causes which had led to its general adoption. Amongst these he mentioned the inefficiency of the treatment ordinarily employed, and the neglect of all measures likely to subdue the tendency to spasm, on which the continuance of the whoop depends. Dr. Fuller regarded the complaint as consisting essentially of bronchitic irritation, usually not very severe, accompanied by reflex spasm of the air-passages, and expressed his opinion that in most cases the spasmodic symptoms are those which demand most serious attention. Not only is the spasm a most painful symptom, but it is one which may give rise to lifelong mischief. His object, therefore, had always been to subdue the spasm as speedily as possible, and the practice which, until the last twelvemonth, he had found most successful for the purpose was the administration of sulphate of zinc in rapidly increasing doses.

Dr. Fuller then referred to the discovery he had made as to the tolerance of belladonna by children, which is recorded in a paper published in the last volume of the "Medico-Chirurgical Transactions," and he briefly stated the facts, which are there detailed *in extenso*, as to the amount of belladonna which may be given with safety, and the conditions which should be observed in its administration. The conditions he specified were, that the remedy should be given in divided doses, at least four times daily, and should be administered at first in small doses, which may be increased day by day, or on alternate days by a corresponding amount. He pointed out that mere dilatation of the pupil need not be regarded as a bar to its administration, and stated that if the precautions just referred to are observed, the daily dose of the extract of belladonna may be safely increased up to a scruple or half a drachm without the production of an unpleasant symptom. He then proceeded to state that he had brought these facts to bear on the treatment of whooping-cough, and, from the conjoint use of sulphate of zinc and extract of belladonna in rapidly increasing doses, had obtained results exceeding his most sanguine expectations. Rarely had he found the whoop to last above twenty-one days, and in some instances it had subsided in ten days. The mode in which Dr. Fuller proceeds is to give the zinc and belladonna as soon as the whoop declares itself. If the attack is accompanied by much febrile excitement and bronchitic irritation, he prescribes a cough drop containing a drachm of antimonial wine and a drachm of ipecacuanha wine to two ounces of water, and, if necessary, applies a blister to the chest. Of the cough drop, a larger or smaller amount is given according to circumstances. In all cases, however, the zinc and belladonna are administered perseveringly. To children under three years of age he usually begins by giving one-sixth of a grain of extract of belladonna and half a grain of sulphate of zinc four times daily, and to children above that age a quarter of a grain of extract of belladonna and a grain of sulphate of zinc. The remedies are given in solution in water, and the dose of each substance is increased by a corresponding dose daily or on alternate days, so that the child who began by taking a quarter of a grain of the extract and one grain of zinc at a dose, would be taking one grain of the extract and four grains of zinc at a dose either on the fourth, sixth, or eighth day, according to the rapidity with which the dose is increased.

Dr. Fuller concluded by citing cases illustrative of the value of the treatment recommended, assuring the Society of its safety, and urging its general adoption.

Mr. Weeden Cooke read a paper

ON THE COMMUNICABILITY OF SECONDARY SYPHILIS.

He said that it was singular how many questions respecting syphilis remained unsettled, considering the numbers who suffered from the disease, and the length of time it had been known and studied. Even the primary symptoms still gave rise to controversy Some declared the hard chancre only infectious; others, that the soft chancre does not infect the constitution, but may produce a hard chancre which does infect; whilst others denominated the soft chancre a cancroid ulcer, which was not syphilitic at all; a fourth party, however, considered both these chancres syphilitic, and therefore capable of producing constitutional symptoms. As a consequence of these differences of opinion, there was much diversity of treatment, which was a practical evil. Respecting the communicability of secondary symptoms, there was yet much to be cleared up. It was a recognised fact that secondary syphilis was conveyed through the father to the fœtus in utero, and from the fœtus to the mother. The author had verified this fact in numerous instances, and related the case of a lady who had two syphilitic children without herself being affected, but on the birth of a third she was infected, and exhibited all the signs of a severe constitutional attack. Although this mode of communication had been long recognised, it had until recently been denied that secondary symptoms ever were communicated from one person to another. It was well known, however, that M. Ricord, the staunch supporter of non-communicability, had been obliged to modify his opinion, owing to the production of incontestable evidence that the discharge from secondary ulcers did produce eruptions and ulcers of a similar character; whilst the French authorities, convinced of the possibility of this infection, not long since prosecuted two medical men for inoculating two children suffering from favus with the matter of secondary syphilitic disease. Mr. Henry Lee, also, had recently brought before the profession instances which favor the conclusion that the constitutional disease can be conveyed from one person to another.

Mr. Cooke then related the particulars of a boy who had been recently under his care at the Royal Free Hospital, exhibiting indubitable evidence of this occurrence. A fine boy, seven years of age, was covered with an eruption, which could not be mistaken for anything but psoriasis syphilitica. He had also enlargement of the occipital glands, the throat was much injected, and he had recently, from being a very healthy boy, become cachectic. He was ordered two grains of grey powder twice a day, and got quite well in less than three weeks. His mother, who brought him, was herself affected with the same eruption. She had also ulcers on the inside of her lips and cheeks, and had suffered much from rheumatism. Her husband had given her primary syphilis one year before. After being "cured" of this, secondary symptoms appeared, and she was treated and got well. She remained well until about six weeks ago, and had since been affected as stated. The boy slept with her, and she was of course in the habit of kissing him. A month after the reappearance of the disease in the mother, the son became affected. This case Mr. Cooke considered conclusive of the possibility of communicating secondary syphilis. It was no doubt a very rare occurrence, because the discharge from a secondary ulcer would very rarely be applied to a raw surface capable of absorbing it; but, when so applied, it evidently had the power of infecting a previously healthy person, and it was most desirable that this fact should be known and recognised.

ROYAL SOCIETY.

Sir Benjamin C. Brodie, Bart., F.R.S., President.

ON THE FREQUENT OCCURRENCE OF PHOSPHATE OF LIME IN THE CRYSTALLINE FORM, IN HUMAN URINE, AND ON ITS PATHOLOGICAL IMPORTANCE.

BY ARTHUR HILL HASSALL, M.D. LOND.

(*Communicated by* Dr. Sharpey, Sec. R.S.)

In 1854 I submitted to the Royal Society a paper, "On the Frequent Occurrence of Indigo in Human Urine." This communication, which was published in the "Philosophical Transactions," attracted considerable attention both at home and abroad. The singular fact of the frequent presence of indigo in the urine, first announced by me, has since been amply confirmed by a variety of observers. I have now to place before the Society some investigations in relation to the not uncommon occurrence in human urine of *phosphate of lime*, as a *deposit*, in a well-marked *crystalline* form.

When the earthy phosphates are treated of by writers, in connexion with the urine, they are usually described collectively, and it is seldom that each kind of phosphate is particularized, and yet there are several which may occur either separately or together. The phosphate of ammonia and magnesia, or triple phosphate, is often specified, but rarely is phosphate of lime separately mentioned, and phosphate of magnesia scarcely ever; and yet phosphate of lime is very frequently present as a deposit in urine, much more so, indeed, according to my experience, than the triple phosphate, excluding those cases of the occurrence of that ammoniacal phosphate, arising from the decomposition of the urea of the urine subsequent to its escape from the kidneys. Even in those few cases in which phosphate of lime is specially mentioned, it is described *usually* as mixed up with the other phosphates, and *always* as occurring in the *amorphous* or *granular*, and never in the crystalline state; further, no peculiar importance is attached to it, as contrasted with the magnesian phosphate.

Even one of the most recent writers on the urine gives the following description of the physical characters of deposits of phosphate of lime in urine:—"deposits of phosphate of lime," he states, "as usually occurring in the urine, and mixed with magnesia, are always white and amorphous, under the microscope appearing in granules, sometimes of a greenish tinge, which exert a refracting action upon light. *Crystallized deposits of this substance have not been observed.*"

I now propose to show, first, that there is a crystalline deposit, the crystals composing which will be described hereafter, which does really consist of phosphate of lime; second, that it is of frequent occurrence in human urine; and third, that it is of greater pathological importance than the deposits of triple phosphate.

I would first remark that I have for years been acquainted with the fact of the recurrence of crystalline phosphate of lime in the urine, and I have referred to it in The Lancet of 1853, and also elsewhere. I should now remark, however, that the statement made by me as to the composition of the crystals, has hitherto been based upon their *qualitative* analysis only, and therefore was not so completely conclusive and satisfactory as could be desired. Until recently I had not made any *quantitative* analyses; these I have since been enabled to perform, and I now furnish the results of the chemical examination of four samples of the deposit.

First Sample.—Filtered from the urine of twenty-four hours; mixed as ascertained in the first instance by means of the microscope, with a very minute quantity of *triple phosphate.*

Bibasic phosphate of magnesia ...	0·15
Bibasic phosphate of lime	1·85
	2·00

Second Sample.—Filtered from urine after the lapse of a day or two; mixed with a small quantity of *triple phosphate.*

Bibasic phosphate of magnesia ...	0·47
Bibasic phosphate of lime	6·18
	6·65

Third Sample.—From urine of twenty-four hours, after the lapse of several days. Admixed with much triple phosphate, as shown first by the microscope, and afterwards by the chemical analysis.

Bibasic phosphate of magnesia ...	4·30
Bibasic phosphate of lime	5·41
	9·71

Fourth Sample.—Separated from six ounces of fresh urine. Deposit very pure.

Bibasic phosphate of lime	1·96

No phosphate of magnesia.

Now the admixture of the phosphate of magnesia in the first three samples was due solely to the fact, that the phosphate of lime, deposited at first in the pure state, was allowed to remain in the urine until decomposition had commenced, and the phosphate of magnesia and ammonia had, in consequence, become formed. Deposits of phosphate of lime are sometimes contaminated from the same cause with carbonate and oxalate of lime.

These analyses are therefore conclusive as to the composition of this earthy phosphate. In order to show that no error has been committed in them, I here append the process adopted. That the deposit in question really consisted of a *phosphate*, was first repeatedly determined by the action of a solution of nitrate of silver; the crystals, when touched with this reagent, assumed a bright golden-yellow color. After having been separated and washed in distilled water, the phosphate was ignited to free it from animal matter, urea, &c., and weighed. It was then dissolved in hydrochloric acid; ammonia was added until a permanent precipitate formed; this was redissolved by the addition of acetic acid. First the *lime* was precipitated from the solution by oxalate of ammonia, and afterwards the *magnesia* as follows:—

Chloride of ammonium was added, then ammonia in slight excess, and, lastly, phosphate of soda. The oxalate of lime formed was converted into carbonate of lime in the ordinary manner, and the phosphate of ammonia and magnesia into the pyro-phosphate of magnesia; these were then weighed separately, and the amounts of the bibasic phosphate of lime were determined by the usual calculations. The results obtained corresponded very closely with the original weights of the ignited phosphates subjected to analysis. The analyses, therefore, show that the crystallized phosphate of lime is a tribasic phosphate, containing two atoms of lime, and, most probably, one of water.

Form of the Crystals.—The size, form, and arrangement of the crystals of phosphate of lime, as they occur in human urine, vary greatly, but the peculiarities are in all cases sufficiently characteristic to allow of the ready identification of this phosphate by means of the microscope. The crystals are either single or aggregated, most frequently the latter, forming glomeruli or rosettes, more or less perfect. Sometimes they are small and needle-like, and then they frequently form, by their crossing and union at right angles, glomeruli or spherules. Sometimes the crystals are thin and flat, having oblique or pointed terminations. Very frequently, however, they are thick, and more or less wedge-shaped, and united by their narrow extremities so as to form more or less complete portions of a circle; the free larger ends of the crystals are usually somewhat oblique, and the more perfect crystals present a six sided facette. I have never yet met with these crystals having both ends perfect, owing, I believe, to the tendency which they have to crystallize from a centre in rosettes. When these crystals are kept in the dry state for a long time, they not unfrequently break down and crumble into powder.

The late Dr. Golding Bird, in his work on "Urinary Deposits," has given a representation of some crystals which he has denominated "*penniform*," describing them as consisting of a variety of the magnesian phosphate; the crystals figured do, however, undoubtedly represent a modification of those of *phosphate of lime*. Although I have elsewhere pointed out this error, most recent writers on the urine still persist in describing these crystals as a variety of the phosphate of ammonia and magnesia.

On the frequency of their occurrence.—I find, as already stated, that phosphate of lime, in the form of crystals, is of much more frequent occurrence in human urine than the triple phosphate, excluding those cases of the presence of the latter phosphate which are due to the decomposition of the urea of the urine subsequent to its emission. I have met with deposits of crystallized phosphate of lime in some hundreds of urines, and in many different cases; it is therefore not a little remarkable, from the frequency of its occurrence, and the peculiarities presented by the crystals, that it should have been so long overlooked. The microscope, therefore, furnishes us, in most cases, with the ready means of detecting the presence of deposits of phosphate of lime, as of so many other urinary deposits.

Characters of Urine depositing Crystallized Phosphate of Lime.—The urine from which phosphate of lime is deposited is usually pale, but occasionally it is high-colored; the quantity passed is large, and the calls to void it frequent, more or less uneasiness and smarting being occasioned by its passage, at the neck of the bladder, and along the course of the urethra; its specific gravity varies greatly. Taking the whole quantity passed in twenty-four hours, it is usually below the average, nevertheless the animal matter and urea are absolutely in excess. It is generally feebly acid, often decidedly so when first voided, the greater part of the phosphate of lime becoming deposited while the urine still retains some degree of acidity; it, however, speedily becomes alkaline, owing probably to the excess of mucus contained in it. Sometimes the crystals of phosphate of lime are thrown down from the urine before its escape from the bladder; ordinarily, however, the urine is bright and clear when passed, and the crystals are not formed until some time after it has been voided. In collecting this phosphate for analysis, the object being to procure it in as pure a state as possible, and as free from phosphate of ammonia and magnesia, oxalate and carbonate of lime, it should be separated from the urine very soon after it has become deposited, and before decomposition has had time to set in.

On the Pathological Importance of deposits of Phosphate of Lime in Human Urine.—Of the pathological importance of excess of phosphate of lime in the urine not a doubt can be entertained, but certain reasons and facts may be advanced to show that deposits of that phosphate have a deeper pathological significance than those of the phosphate of ammonia and magnesia. The proof of this is the more necessary, since writers on the urine are in the habit of describing, as well as of treating, deposits of the earthy phosphates collectively, and without distinguishing between them; this course was natural enough so long as they were unacquainted with the fact that deposits of phosphate of lime, in the state of crystals, are of frequent occurrence, or so long as they mistook them for a variety of the ammonio-magnesian phosphate. One reason why we should be disposed to attach greater importance to the excess of the calcareous than the magnesian phosphate, is that most of the phosphoric acid of this last phosphate, and all the magnesia, are derived from *without*, being contained in the various articles consumed as food; while for the phosphate of lime, we have in the system—in the teeth and bones, and also in the nitrogenous tissues—sources containing some pounds weight of this phosphate.

That the osseous system is subject to disintegration is certain, and that the extent and rapidity of this differ remarkably in different cases is equally so. This is shown by the simple fact alone, of the early and rapid decay of the teeth in many persons. For this general reason therefore only, we should, *a priori*, be disposed to attach greater impartance to the occurrence of deposits of phosphate of lime than those of phosphate of magnesia.

Other facts tending to confirm this view are,—first, that while deposits of phosphate of lime are frequently met with, those of phosphate of magnesia (not the ammonio-magnesian phosphate) are exceedingly rare; and second, that the calcareous is of more difficult solubility than the magnesian phosphate. This last circumstance explains probably why phosphate of lime falls as a deposit from acid urine, while phosphate of magnesia remains in solution.

The particular or special reasons for regarding deposits of phosphate of lime as of more moment than those of the triple phosphate, are derived from direct pathological observation. I have observed that when this deposit occurs, it is very apt to be persistent; and when it has disappeared, to return whenever the health is reduced from any cause. I have also noticed, that when it is persistent, it is usually associated with marked impairment of the health, and this often where organic disease does not exist. The prominent symptoms in one case of calcareous phosphatic deposit which I have had under observation for some years, were,—great disorder of the digestive organs, frequent and distressing headaches, occasional vomiting, debility, emaciation, great irritability of the nervous system, sexual powers weak, pulse slow and feeble, skin cold, urine in excess, of rather low specific gravity, acid when passed, but seon becoming alkaline, micturition frequent, with irritation at neck of bladder and in the course of the urethra; teeth much decayed. It should be stated that there is in this case a very slight tendency to paralysis of the right leg, as shown by an occasional sensation of coldness in the limb, and slight deficiency of power in it at times only. This symptom is, however, by no means a constant or necessary one in such cases.

If these views of the pathology of phosphate of lime be correct, we should expect to find an excess of that phosphate in the urine in great and rapid waste of tissue, during the rapid decay of the teeth, and in cases of mollities ossium. That there is an excess of the calcareous phosphate in the urine in these cases, is shown alike by observation and analysis.

It is obvious from this imperfect sketch, that much remains to be effected in regard to the pathology of phosphate of lime; but now that the frequency of its occurrence in human urine as a crystallized deposit is made known, its pathology, apart from that of the triple phosphate, will no doubt be specially considered.

It will be apparent from the following quotation, that the late Dr. Golding Bird regarded deposits of phosphate of lime as of more consequence than those of the triple phosphate:—"The pathological state of the system accompanying the appearance of deposits of phosphate of lime is analogous to that occurring with the triple phosphate; indeed, as has already been observed, they often, and in alkaline urine always, occur simultaneously. So far as my own experience has extended, when the deposit has consisted chiefly of the calcareous salt, the patients have appeared to present more marked evidence of exhaustion, and of the previous existence of some drain on the nervous system, than when the triple salt alone existed, unless its source is strictly local.

It should be remembered that these remarks of Dr. Bird refer to deposits of phosphate of lime in the *granular state*, and not to the crystalline deposits, with the occurrence of which he was unacquainted. I have already stated that, according to my experience, the granular calcareous phosphatic deposits are much more rare than the crystalline.

It follows from these observations and investigations:—

1st. That deposits of *crystallized* phosphate of lime are of frequent occurrence in human urine, much more so, indeed, than those of the amorphous or granular form of that phosphate.

2nd. That the crystals present well-marked and highly characteristic forms, whereby the identification of this phosphate, by means of the microscope, is rendered easy and certain.

3rd. That there is good reason to believe that deposits of phosphate of lime are of greater pathological importance than those of the phosphate of ammonia and magnesia.

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SOUTH HANTS MEDICAL AND CHIRURGICAL SOCIETY.

AT the last meeting of the Society, Dr. Wiblin, the President, read the following paper on

EMOTIONAL PARALYSIS.

The term "Emotional Paralysis" originated with the late Dr. Todd, in a description of a kind of hemiplegia which, in its mildest form, produces a total loss of speech, and is met with most frequently in patients who have been subjected to some powerful or exciting emotions of the mind. All authors, you are aware, describe most graphically that form of paralysis of the tongue and muscles of articulation which is constantly the concomitant of hemiplegia and apoplexy; but emotional paralysis, which is characterized by a total loss of speech, associated with difficult or imperfect deglutition, is a disorder of very rare occurrence. Dr. Todd, in his admirable lectures on the various kinds of hemiplegia and brain diseases, makes a passing reference to this subject and states that he, in his extensive field of inquiry, had seen but little of the disease. Yet he considered it sufficiently marked to demand special notice. He says, "It occurs in men of hypochondriacal habits, and in women too. In its mildest form it may be distinguished as 'emotional paralysis;' or when it affects one side of the body, 'emotional hemiplegia.' It most commonly consists in a simple loss of speech occurring under some strong excitement, the power of speech returning usually in a few days, and, indeed, very rapidly after the patient has regained the ability to pronounce one or two words, such as 'yes' and 'no.'" From the cases on record of this interesting disease we are led to believe that if the paralysing lesion be confined to some temporary congestion of parts about the origin or course of the lingual and glosso-pharyngeal nerves, we may safely rely upon a very rapid return of the power of speech; and in the case of the patient at present under my treatment I have found that the diagnosis so ably depicted by the author referred to has been fully confirmed. I now propose to give the history and treatment of the case in question.

About two o'clock P.M. on the 4th of July, I was called to a gentleman, aged fifty-three, of robust constitution, weighing over sixteen stone, whom I found on his sofa, surrounded by attendants in great alarm at the condition in which he had been brought home. For some ten days previous to the attack, he had been observed to be exceedingly desponding, and attached more importance to ordinary matters of business than he was accustomed to do; and on the morning of the above date, some trivial matter of business gave origin to a degree of excitement most unusual with him, which was followed by this train of symptoms: he was incapable, on my entering, of articulating a single syllable; he had a full, bounding pulse, 110 to the minute; flushed countenance, great heat of the scalp, the mouth drawn to the right side, the pupils natural, and he himself evidently participating in the alarm of those around him. On being questioned as to his condition, of which he appeared painfully cognizant, he burst into a fit of deep sobbing and crying He was then requested to put out his tongue, which he accomplished with some difficulty; it was exceedingly foul, tremulous, and directed to the right side of the mouth. He had perfect control over the movements of the upper and lower extremities; and when asked if he was suffering from pain anywhere, directly placed his left hand over the left side of his head. It was then suggested that he should be carried up-stairs to bed, which proceeding he opposed by his gesticulations, declining the assistance of every one near him, and, walking firmly up two flights of stairs to his bedroom, undressed himself, and, unassisted, got into bed. A large blister was applied to the nape of the neck, a brisk purgative administered, and a sheep's bladder, containing pounded ice, was ordered to be kept constantly applied to the head, particularly the left side. He passed the night in a comatose condition. By the morning his bowels had been freely relieved. The left side of the head was still exceedingly hot, and his countenance flushed. On being aroused, he was quite conscious of his condition, and made signs to his attendants to bring writing materials. A slate and pencil were given to him, on which he wrote cyphers perfectly unintelligible, but in the course of a few hours was able to express in writing some directions which he was desirous should be given to his clerk. During this interview, he was seized with several paroxysms of sobbing and crying, after which he again fell into a comatose condition, from which, however, he could at times be readily aroused. The application of ice to the head was continued throughout the day and night.

On the morning of the 6th, his condition was in no degree improved. He had passed a restless night, and was evidently fretful, and, from what he wrote on the slate, desponding as to his painful position. On this day occurred constant paroxysms of yawning and crying. He made great efforts to speak, but was unable to articulate a single sound. In the evening he was ordered another brisk aperient, and the same appliances to the head; sleeping comatose throughout the night.

On the 7th, the pulse had somewhat abated, having fallen to 96 per minute; the tongue continued furred with white, slimy mucus, although the bowels had again been freely acted on. On this day, the attendants were much gratified to find that some improvement had taken place in his articulation, as he was enabled to give utterance to the monosyllables "Yes" and "No."

During the four preceding days, when liquids were given to him, he experienced great difficulty in swallowing, the fluids partially dribbling down over the right angle of the mouth. He was painfully aware throughout of his inability to perform as usual the act of deglutition, pointing to his throat, and writing down on the slate his fears of being choked. He was unable to grasp with his lips any vehicle offered to him for the administration of various beverages. The pain on the left side of the head was at times referred to, and was combated by the continued applications already referred to.

He passed a more tranquil night on the 7th, and on the morning of the 8th appeared more refreshed from his sleep. To-day he could articulate and swallow much better, and gave us to understand that he had no sensation about the right angle of the mouth, nor could he now control the right angle of the orbicularis oris, as was evidenced whilst lying on his right side by a constant dribbling of saliva on to the pillow. Every hour appeared to evince marked improvement in his articulation. Paroxysms of crying and yawning still continued, but he passed another good night.

On the morning of the 9th, he inquired with tolerable distinctness of articulation how I myself felt in my head. (On the previous evening I had complained to his wife that I was suffering from rheumatism of the muscles of the back of the head.) His diet, which up to this time had consisted of cold iced drinks and lemonade, was altered to weak beef-tea and a tablespoonful of sherry-and-water about every four hours.

From the 10th to the 20th of the month his progress was slow, but satisfactory; he was able to sit up daily for some hours, and could enter into conversation for short periods with a tolerable degree of distinctness in his articulation.

On the 22nd, he was able to join his family at dinner and tea, and has continued to do so up to the present time. There still remains, however, some want of motion and sensation in the right angle of the mouth, and the tongue, on being protruded, is directed slightly to the right side, in consequence of the healthy muscles being relieved of the antagonism of those which are paralysed.

A question of great practical and pathological importance now suggests itself—viz., to determine, as far as possible, the cause and condition of the parts involved in this special form of paralysis. I believe that the symptoms above referred to are readily solved by ascribing them to some slight pressure or structural change at the origin or in the course of the lingual and glosso-pharyngeal nerves; and I consider that this supposition is fully borne out by the rapid progress the patient has made towards convalescence.

A Mirror
OF THE PRACTICE OF
MEDICINE AND SURGERY
IN THE
HOSPITALS OF LONDON.

> **Nulla est alia pro certo noscendi via, nisi quam plurimas et morborum et dissectionum historias, tam aliorum proprias, collectas habere et inter se comparare.—Morgagni.** *De Sed. et Caus. Morb.*, **lib. 14. Prooemium.**

ST. BARTHOLOMEW'S HOSPITAL.

EXTENSIVE HÆMATURIA, FROM SUSPECTED DISEASE OF THE KIDNEYS, CONSEQUENT UPON FORMER INJURY: RECOVERY

(Under the care of Dr. Farre.

Blood in the urine is a symptom which generally produces much alarm and disquietude in the mind of a patient. The significance of its presence should be determined by the causes giving rise to it; and these are not only very numerous but may exist in all parts of the genito-urinary apparatus. Thus besides the various diseases of the kidneys there are certain affections of the ureters bladder prostate gland, and urethra, which are accompanied by hæmaturia. It is a prominent symptom in certain fevers, of which variola, scarlatina, and typhus may be taken as examples. Occasionally it is a vicarious secretion in amenorrhœa; and now and then a rare case presents itself in which mental disquietude has been the sole cause. Instances of the last are given by Rayer, and a very striking one forms the subject of a clinical lecture by Dr. Basham, at the Westminster Hospital, published in a previous volume of this journal, (1857,) wherein the question is considered whether blood in the urine is a symptom of kidney disease or otherwise. We may refer also to a paper on Passive Hæmorrhage from the Kidneys, by Dr. Crooke, of Chorley. (1854). We see no reason why an erratic or movable kidney (a peculiarity first brought under the notice of the profession by Dr. Hare) should not occasionally be attended with hæmorrhage, consequent upon the pressure of neighboring organs, during its temporary dislocation.

The condition of the patient affected with hæmaturia, together with a rigid analysis of the previous history, will determine its origin in the majority of cases. The great point to be ascertained is the special organ at fault; and if it be the kidney, the physician has a number of affections from which to choose in making his diagnosis; but that this is not always an easy matter the annexed case proves.

The hæmorrhage in the two cases which we here record originated in the kidney, and in each an injury first gave rise to it. In Dr. Farre's patient, the quantity of blood present in the urine was at first so considerable as most seriously to prostrate the patient; and the rapidity with which it came away led to the belief that there might be a malignant fungous growth within the pelvis of the kidney. The color of the urine varied as the amount of blood became less. At first it was a deep red, with an abundant sediment at the bottom of the vessel, and occasional clots; this persisted for several days in spite of treatment, and the poor woman became perfectly blanched. The urine then became lighter in color; and finally both the sediment and clots disappeared. The countenance was that of cachectic anæmia, and it is possible there may have been malignant disease of the kidney, originating the injury received some years before. The cutting pain and uneasiness in the loins, the left especially, together with the nature and appearance of the diffused blood, pointed to the seat of the hæmorrhage, although there were some clots; these latter, however, may be attributed to the rapidity with which the blood passed along the ureters to the bladder.

Although we have much to guide us in our efforts at making a diagnosis, yet we know that chronic disease of the kidney alone will give rise to hæmorrhage; but it cannot be said for a certainty what the real nature of the mischief is which has here produced it. There was no symptom of calculous disease, nor was there ever a stone passed from the bladder The character of the pain was not unlike that accompanying the entrance of a stone into the ureter In obscure cases, however, where there are none of the ordinary symptoms of renal disease, the physician will be safe, in the majority of instances as Dr Watson has pointed out in his "Lectures on Physic, in referring hæmaturia to renal calculi

Of the substances employed to arrest the hæmorrhage, alum seemed to be the only one that exerted any marked and decided influence upon it; and when the patient left the hospital she had much improved, but remained extremely weak and feeble.

For the notes of the case we are indebted to M. Schollick clinical clerk.

Esther G——, aged fifty, was admitted into Mary ward on Dec. 26th, 1859. She is a dressmaker, pale and anæmic appearance: is married, and has had seven children, but none of them were born alive; she had always tedious labours. In 1851 she was operated upon by Mr. Stanley for fistula; from that time she has not been so strong in health although the fistula was cured About a month after the operation she had femoral hernia on the left side, which was reduced by the taxis, and twelve months after the operation she had femoral hernia on the right side, which was also reduced by the taxis She wears a double truss. She states that two years ago she had a sharp cutting pain in the left lumbar region, followed by a discharge of blood with the urine, but it did not continue. About a fortnight before this she fell against the end of a seat in a railway carriage, and hurt her left side just at the margin of the ribs. She had two other attacks of hæmaturia, the second of which lasted three months. It is now two months since the third attack. She states that the present commenced on Dec. 9th, and each was preceded by a sense of languor and unfitness for exertion; then a sharp, cutting pain in the left lumbar region, shooting downwards towards the bladder. She now states that the pain shoots from the left to the right lumbar region; there is great tenderness on pressure in both sides. When the hæmaturia begins it appears like urine with a little blood in the middle, afterwards it is thoroughly mixed up with it, and occasionally is clotted. Skin cool and moist; feet cold; pulse 90, moderate in volume; tongue pale, slightly furred, moist; no appetite; bowels regular; very restless and wandering at night. She states that her relatives are all healthy, but her father had hæmorrhage from the urinary organs before his death. Ordered a linseed-meal poultice to her left side, four ounces of wine, beef-tea, and fifteen minims of the muriated tincture of iron in peppermint-water twice a day.

Dec. 27th.—She was in great pain last night: felt very weak. She had rigors, was cold all night: complains also of headache; passed blood eight or nine times during the night. Skin cool and moist; pulse 88, moderate in volume; tongue clean; no appetite; bowels open. No relief from the poultice, as it turned cold and made her shiver; had great pain in the left side. Four minims of tincture of opium ordered in each dose of her medicine.

30th.—Seems in a weak state this morning; the hæmorrhage still continues as copious as ever; she was obliged to get up to pass a clot this morning, and fainted away; skin cool and moist; pulse 84, but not so feeble as might be expected; tongue pale, but clean; feels as if she could eat something; bowels confined; did not sleep at all last night; she had sharp, cutting pains in the left groin. To have three grains of acetate of lead and half a drachm of oxymel, in peppermint-water, every three hours. The next day this was changed to ten grains of gallic acid every four hours.

Jan. 1st, 1860.—The hæmorrhage still continues, with the passage of large clots. A turpentine draught was ordered every three hours, and the gallic acid to be continued.

5th.—She was put upon alum, which reduced the quantity of blood passed in a couple of days. On the 8th, there was more hæmorrhage; the bowels were well opened. On the 9th, complained of heat about the head and other symptoms of anæmia; no clots were now passed.

12th.—The hæmorrhage now seemed to be passive. Ordered the muriated tincture of iron, with occasional aromatic draught, with ten minims of tincture of opium. This, by the 16th, wholly arrested the bleeding, but she was very weak.

Feb. 6th.—Progressed in every respect since Jan. 25th. She was now put on the same preparations of iron, eight minims, in infusion of quassia, thrice a day. Had a little diarrhœa yesterday, and pain in loin.

13th.—Has been sitting up for some days, and can walk along the ward with assistance; is much improved, although weak.

18th.—She left the hospital.

KING'S COLLEGE HOSPITAL.

OBLITERATED URETHRA FROM INJURY; THREE FISTULÆ IN PERINEO; SATISFACTORY RESULTS FROM TREATMENT.

(Under the care of Mr. Fergusson.)

As illustrating some of the varieties of stricture and its consequences, we place upon record five examples in which the urethral canal was affected; in the first, from a severe injury; and, in the others, from former attacks of gonorrhœa. They were submitted to different modes of treatment, according to the necessities of each case, and with satisfactory results.

The first following case well illustrates the difficulty experienced in closing perineal fistulæ which have resulted from external laceration of the urethra. They are oftentimes more difficult to manage than the most intractable forms of stricture arising from other causes. The canal was actually obliterated at the time of the patient's admission; yet he was discharged capable of passing his urine in the natural manner, but with a small fistula still remaining at the root of the penis.

For the notes of the case we are indebted to Mr. Francis Mason, the late house-surgeon to the hospital:—

J. H——, aged twenty-two, was admitted Dec. 15th, 1859. The patient is a healthy-looking seaman, and states that in the month of September, 1858, he was wrecked while at sea, and was struck on the perinæum by a large beam, lacerating the urethra, the urine passing by the wound for upwards of two months. About three months after the original wound in the perinæum had all but healed, he noticed three additional fistulæ in this region. These continued up to the time of admission into the hospital. On two or three occasions at the time of his visit, Mr. Fergusson attempted, without success, to pass a catheter; and on the 21st of Jan., 1860, the patient having been narcotized, a No. 5 catheter was introduced and retained.

Jan. 30th.—Has gone on well since the introduction of the catheter, only having had one or two attacks of shivering.

Feb. 20th.—The urine came tolerably freely by the natural passage; but some still passes by the fistulous openings. He suffers considerable pain on micturition.

28th.—To-day Mr Fergusson passed Nos. 6, 7, 8, and 10 without difficulty. An opening in the urethra was found this morning at the angle of junction of the root of the penis and scrotum.

29th.—The pain still continues when the patient passes urine, and was so severe last evening that he dreaded doing so; a catheter was therefore passed by the house-surgeon, and the urine drawn of.

March 6th.—Is going on very well; urethra in a much less irritable condition; fistulæ all but healed, but the opening at the root of the penis still continues.

31st.—Mr. Fergusson determined to attempt to close the opening, and having pared the edges, brought them together with silver wires. An elastic catheter was introduced, and retained in the ordinary manner.

April 3rd.—The silver sutures have ulcerated, through the skin; but the opening is decidedly less than before the operation. In other respects the patient is in a most satisfactory condition.

TWO CASES OF STRICTURE OF THE URETHRA SUCCESSFULLY TREATED BY THE URETHROTOME DILATOR.

(Under the care of Mr. WOOD.)

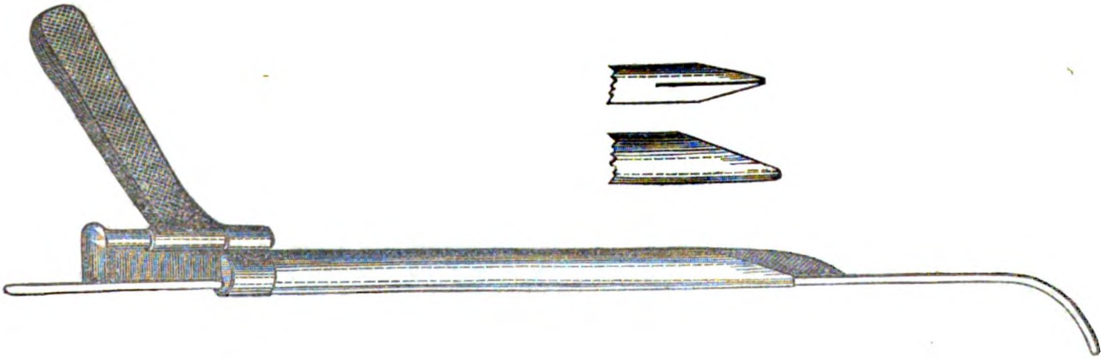
Two cases of stricture of the urethra were operated upon by Mr. John Wood, on the 16th of May, with his new instrument, the "urethrotome dilator." The first of these cases was that of a man of about forty, who had been suffering from stricture for many years, and had never had a larger instrument than a No. 4 passed. The stricture was situated three or four inches from the meatus, and admitted a No. 2 catheter pretty readily. The second case was that of a gold-digger lately returned from California, where he first became afflicted with stricture, the result of gonorrhœa. In this case the urethra was very irritable, the stricture being situated in the most common locality—namely, at the junction of the bulbous with the membranous portion of the urethra. A No 4 catheter was passed by Mr. Wood, after much careful manipulation.

The instrument which Mr. Wood has but very lately brought under the notice of the profession combines the method of dilatation with that of the internal division of strictures. and consists—

1. Of a long steel staff, of about the calibre of a No. 2 catheter, grooved along its convexity, except for about two inches at its point, where it is curved to that extent.

2. Of a German silver canula, of the size of a No. 12, conical at its point, on the under surface of which there is a slit about half an inch in length This canula is fitted with a convenient handle, fixed at an oblique angle.

3. Of a flat steel stilette, the point of which consists of a lancet-shaped cutting edge, about three-quarters of an inch long, working in the groove of the director, by means of a thumb-plate and spiral spring.



The method of using this instrument seems to be simple and easy of application. The steel director is first passed through the stricture into the bladder, which fact may be ascertained by the urine trickling through the groove. The position of its point is always indicated by the groove, which is situated on the convexity of the instrument, and the short curve at its point allows it to be turned in any direction. The dilating canula is then slid over the director down to the stricture, which its conical point enters for a certain distance. Then the stilette is slid within the canula down the groove of the director, and on pressing the finger-plate at its extremity the cutting edge is protruded for about a quarter of an inch through the slit at the point of the canula, and still sliding in the groove in the director. It returns within the canula by the spiral spring in the handle extremity of the instrument. The dilating canula is now pushed on, and if it does not pass through the stricture, this may be scarified at its inferior, lateral, or even superior aspects, and the dilator pushed through it. The dilating and cutting portions of the instrument are now withdrawn, still leaving the original director. Over this again an elastic catheter is passed into the bladder, and the director withdrawn through it. In the two cases in which Mr. Wood operated, the instrument answered perfectly, the operation being performed without the aid of chloroform. In the first case there was no bleeding, and in the second only a few drops of blood escaped. Little pain was experienced by the patients, who walked home shortly afterwards, suffering little uneasiness.

Mr. Wood, in his remarks after the operations, made reference to the relative value of his instrument with those for the internal division of strictures from behind, in which a comparatively large-sized instrument must be passed through the stricture before scarification can be had recourse to. He said that the chief recommendations of the urethrotome dilator were—1. The safety with which it might be used. 2. That the cutting portion of the instrument would only cut the indurated and contracted tissues of the stricture, and only just sufficient for the passage of the dilating canula. 3. That all previous dilatation of the stricture became unnecessary. 4. That it affords a ready means of combining dilatation with limited section of the stricture.

May 19th.—The second patient presented himself to-day, having suffered scarcely any inconvenience from the operation, since which the urine has been passed more freely, and in a larger stream. A No. 8. then a No. 9, and finally a No. 10 catheters were passed with ease.

CHARING-CROSS HOSPITAL.

PERMANENT STRICTURE OF THE URETHRA OF LONG STANDING. WITH PERINEAL FISTULA, TREATED BY DILATATION WITH BOUGIES.

(Under the care of Mr. CANTON.)

A STEADY perseverance in the use of dilatation by means of bougies, in the following case, not only relieved an old stricture, but nearly closed up a fistula of the perinæum; indeed, when we last saw the patient it appeared almost obliterated, and his general health had very much improved. The notes of the case were furnished by Mr. W. Travers, house-surgeon to the hospital.

Charles C——, aged thirty-six, laborer, of intemperate habits until about ten years ago, since which time he has lived a very regular life. Found no obstruction in passing urine until seventeen years ago, when he had a severe attack of gonorrhœa, which lasted for nearly two years; from this date he has noticed that the size of the stream of urine became gradually less, and that he required to void it more frequently. Twelve years back he had a chancre on the glans penis; this has left much induration around the canal for the first half-inch of its course, and a fistulous opening close to the frænum. He states that in July last year he received a kick by the side of the anus; the part became swollen and tender; an abscess formed, and at length burst; and after some little time he observed, whilst passing urine, that some of it flowed through this wound; this it has continued to do, more or less, ever since.

Admitted March 27th.—Urethral canal generally contracted, but in some places so much so as to render it impossible to pass a No. 1 bougie. Orifice very small and indurated. On passing the instrument along the canal a grating feeling was noticed in two or three places; on arriving at about five inches from the orifice, the point of the bougie, unless the handle was well depressed, appeared to enter a kind of cul-de-sac—entering, in fact, the perineal fistula. An external examination showed a small opening at the left margin of the anus. leading apparently into the rectum, but in reality opening into the urethra. The patient appears in good general health, and makes no complaint of anything but the mere annoyance.

April 11th.—From this date bougies were introduced daily; it was, however, many days ere a No. 1 could be got quite into the bladder.

The stricture has gradually disappeared, there having been but one break in the constant improvement. The fistula is nearly closed, the urine flowing through it only occasionally, and then merely a drop or two. At the present date (July 4th) a No. 12 catheter can be passed with ease.

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GUY'S HOSPITAL.

RECURRENCE OF AN ADENOCELE OR MAMMARY GLANDULAR TUMOUR AFTER THREE SUCCESSIVE REMOVALS; ULTIMATE CURE.

(Under the care of Mr. Birkett.)

A thorough acquaintance with the various tumours involving the mammary gland is essential to the forming of a correct opinion as to their malignancy and liability to recurrence. When growths appear at an early age—say in women under thirty—the probabilities are in favor of their benignancy, and that they pertain to the class of chronic mammary, mammary glandular, sero-cystic, or adenoid tumours, as they have been described by Sir Astley Cooper, Sir Benjamin Brodie, Mr. Birkett, and other writers. A tumour met with in the breast of a young girl, for instance, is most commonly of this nature, although occasionally there are exceptions; and when once removed, they never return. Such examples are by no means rare; many have appeared in our "Mirror." We examined two on the 17th inst. at another hospital: one in a girl of fourteen, with a small adenocele of the right breast; another in a young woman aged twenty-seven. These patients had applied for advice under the impression that their tumours were cancerous; their true nature was, however, readily made out. In the latter part of 1859, we saw three examples in young patients, under Mr. Birkett's care at Guy's Hospital, all successfully operated upon. One of these was especially interesting, because both breasts contained a tumour; that in the lower part of the right had been growing for three or four years, and was always painful before the appearance of the catamenia; and some three or four months previous to her admission into the hospital, several small growths were developed in the left breast. The one occupying the right gland was alone removed on the present occasion. A similar form of tumour, developed during pregnancy, in a young married woman, we saw Mr. Birkett excise in October last; it had prevented suckling, and was deeply seated behind the nipple. A good recovery ensued, without damage to the proper glandular structure.

That these simple or innocuous tumours, nevertheless, do occasionally recur, we have clear evidence to prove, and the following instance is an example. There is a point of some importance in the case moreover, not to be overlooked—viz., that although the primary disease resembled the chronic mammary tumour, yet the age of the patient was greater than that at which the malady usually shows itself; and after three removals it recurred a fourth time, the extirpation of the entire gland having been followed by perfect success thus far. Curiously enough also, although the glandular elements were observable on each occasion, yet the tumours varied in their characters, being at one time mammary-glandular, and at another cysto-sarcomatous.

The case of this patient, now fifty-three years old, is reported in Mr. Birkett's paper, on Adenocle, in "Guy's Hospital Reports" for 1855, p. 161.

The facts are as follows:—The patient was forty-five years old when the first growth was discovered. This growth had existed eleven months when removed. One year and ten months elapsed before the discovery of the second tumour, which was excised three months subsequently. In the course of eight months a third growth made its appearance, and was removed four months afterwards. All the growths showed the elements and tissues of the mammary gland structure; but the first and last most closely resembled the "chronic mammary tumour" of Sir Astley Cooper, whilst the second belonged to the class "cysto-sarcoma" of other pathologists.

This case and another are related to prove the alternation which may occur between these new growths in the same individual at different times, as well as the probable identity in their physiological relations.

In November, 1856, the patient showed Mr. Birkett a fourth very small growth near the cicatrix, but on the axillary part of the breast, which had not been taken away. She had then been free from recurrence one year and eight months. During 1857–8, and the early part of 1859, scarcely any increase in the tumour took place; but in the spring and during the summer it rapidly enlarged, and at the time of removal measured about four inches in the largest diameter.

This fourth growth was excised August 23rd, 1859, together with every particle of the normal breast gland-tissue which could be found. It consisted of the same elements as those composing the former growths; but in this instance it showed, with the happiest effect, a combination within the same envelope of the "chronic mammary tumour" of Sir A. Cooper, and the "cysto-sarcoma;" for in some parts were firm, fibrous, solid gland-like masses; whilst in others, cysts, with the characteristic fluid and intra-cystic growths, met the eye. The patient suffered very little during the healing of the wound, which was nearly complete in about a fortnight, and the patient left the hospital quite well.

LONDON HOSPITAL.

MAMMARY GLANDULAR AND SERO-CYSTIC TUMOUR; AMPUTATION OF THE BREAST.

(Under the care of Mr. John Adams.)

When non-malignant growths occur in the breasts of middle-aged persons, there is sometimes reason to fear that they may be actually malignant; and an examination after removal can alone determine their real nature. They would seem to hold an intermediate position, in some instances, between the cancer of the elderly, and the mammary glandular tumour of young females. In the history of the following case, it will be noticed that there is evidence of cancer having existed in the family. There were, however, not any external manifestations of cancer but cysts could readily be made out. After removal, it was found to be the sero-cystic disease of the breast as described by Sir Benjamin Brodie, made up of modified mammary glandular structure.

A female, aged forty-eight years, of a sanguineo-lymphatic temperament, was admitted in the beginning of the present year. The left mammary region was occupied by a large, slightly pendulous tumour, which had been in course of development for five years. It was larger than three fists in volume, irregularly convex in outline, and of unequal density, and here and there a cyst could be made out superficially in its substance. Several large veins ramified over its cutaneous surface, but the skin was healthy, though attenuated, and could be moved freely over the subjacent parts; the tumour could also be readily moved from the deeper-seated structures. The nipple was healthy, and the axillary glands were unaffected. The patient ascribed the occurrence of the swelling to a slight local injury. The pain during its growth had been very variable in duration, recurrence, and intensity, but had never been very severe; and the catamenia for the same period had been quite regular up to the time of her admission into the hospital. No hereditary tendency to mammary disease could be traced, but the patient stated that her maternal aunt had died from a cancer.

Mr. Adams amputated the tumour after she had remained quiet for a few days in the hospital. It weighed thirty-two ounces, and was found to have been developed behind the outer two-thirds of the mammary gland, which had been removed with the tumour during the operation, the inner third being allowed to remain *in situ*. The diseased structure was quite distinct from the gland, condensed connective tissues separating the one from the other. On section, a large quantity of yellow colloid fluid exuded from the surface of the solid tissues, and escaped from several cysts of various sizes amidst it. The growth was irregularly-lobed and lobulated, and the appearance arose from the presence of dense fibroid tissue permeating it in every direction, and dividing it into larger and smaller portions, which, after section, became remarkably convex on the surface, being, as it were, squeezed forward by the contraction of the different divisions of this tissue. The color was pearly and glistening through the greater part of the extent of the tumour; through the remainder, it was more or less pink, in consequence of the structure being tinged in different degrees with blood.

The microscopic examination, conducted by Dr. Andrew Clark and others, confirmed the first opinion of the structure of the diseased mass being made up of modified mammary-gland tissue.

The patient went on well after the operation, and subsequently left the hospital.

KING'S COLLEGE HOSPITAL.

MAMMARY GLANDULAR TUMOUR, WITH A PREPONDERANCE OF FIBROUS TISSUE, COMMENCING AT FOURTEEN YEARS OF AGE.

(Under the care of Mr. Fergusson.)

Although the tumour in the present instance we heard described as fibrous, it is most probable that it was originally a true adenocle commencing when the patient was fourteen years of age, remaining quiescent until pregnancy occurred two years ago, when it began to grow larger. Before removal, its physical characters were those of a mammary glandular tumour, and on section afterwards its resemblance to this description of disease was even more striking. It differed, however, in this respect, that it had a large quantity of fibrous tissue disseminated throughout its substance—a feature not uncommon in this form of disease of the breast. Indeed we may remind the reader that hypertrophy of the glandular structure, with an equal enlargement of the fibrous tissue, which envelopes and intersects the gland, are usually noticed in these cases. No microscopic examination was made to determine the ultimate structure of the removed mass.

For the notes of the case we are indebted to Mr. William Wickham, house-surgeon to the hospital:—

Hetty T——, aged thirty-four, a married and healthy-looking woman, and the mother of two children, was admitted on the 10th of May, 1860. She states that twenty years ago she noticed a substance about the size of a filbert in her left breast. She took little notice of it, as it caused no pain or inconvenience. It increased very little in size until two years ago, when she became pregnant; it then grew very rapidly, and continued to do so up the time of her admission into the hospital. During these last two years she has suffered more or less pain, of a smarting character, and particularly during the period of lactation (when milk was secreted by the affected as well as by the sound breast.)

On examination, the tumour was felt as a hard isolated growth, about the size of a child's head, being quite movable on the walls of the thorax, and not adherent to the skin. Over the inner half it was very hard and uniform, and the skin covering it very tense. The remaining portion of it was somewhat lobulated in appearance, and a feeling resembling fluctuation was perceptible in three or four places; the skin in these situations was very red and thin.

May 12th.—The patient being placed under the influence of chloroform, an incision was made extending transversely from the inner margin of the tumour to the anterior fold of axilla. The skin and subjacent tissues, of which none was removed, were easily separated from the tumour. The mammary gland was not involved in the operation, it being left pretty well entire. Several small vessels were secured by ligatures, and the edges of the wound brought together by silk sutures. On examining the tumour, it was found to consist chiefly of fibrous material, there being on its under surface some isolated portions of fat. In one or two places the fibrous portion was somewhat softened, corresponding in position to those places where, before removal, a feeling somewhat analogous to fluctuation was perceptible. Weight of tumour, 3 lbs. 12 oz.

The patient has done remarkably well since the operation. A greater portion of the wound has healed, and the skin has greatly contracted. There is now a slight and healthy discharge of pus from the lower part of the wound.

INVAGINATION OF FIVE INCHES OF THE ILEUM INTO THE CÆCUM AND ASCENDING COLON; FATAL RESULT.

(Under the care of Dr. JOHNSON.)

THE notes of the following interesting case were furnished by Dr. Edmund Symes Thompson, late house-physician to the hospital:—

A farmer's boy, fifteen years of age, was admitted on April 2nd, affected with catarrh and slight rheumatic pains. He had been but a few hours in the hospital when he was seized with pain in the abdomen, vomiting, and purging, the motions consisting only of blood and mucus. Opiates were administered; but the symptoms continued unabated. On the following day the patient had an anxious expression of countenance; his pulse was of natural frequency, but very feeble; a resisting mass, of the size of a doubled fist, which felt like coils of intestine, dull on percussion, and very tender to the touch, was noticed in the right iliac fossa.

The case being regarded as one of intussusception, occurring at or near the termination of the ileum, an operation for the relief of the constricted bowel was suggested, but deemed inadmissible by Mr. Fergusson, whose opinion was consulted. Five grains of compound soap-pill were given every three hours, with effervescing draughts to allay the sickness; and several pints of warm water were injected into the colon by means of a long tube. Under this treatment the restlessness diminished, and the patient ceased to complain of pain. The distension and tenderness, however, daily increased, the bowels were not relieved, retching and vomiting continued; but on the 7th (five days after admission), the sickness and abdominal tenderness suddenly abated, the eyes became sunken, the face distressed and worn, and it was evident that collapse was setting in; the abdomen was very hard, except in the track of the transverse colon, where it was soft and resonant. On the morning of the 9th, the patient vomited a round worm (Ascaris lumbricoides), about five inches in length. Throughout the illness the urine was natural, both in quantity and quality. Death occurred on the morning of the 11th (ten days after the first symptoms of obstruction had appeared).

Post-mortem examination.—The intestines were found to be loosely adherent to one another, and to the abdominal parietes, by recently-effused lymph; the small intestines were congested and filled with fæcal matter; and the transverse colon was distended with flatus. On laying open the large intestine, a portion of the ileum, about five inches in length, was found invaginated within the cæcum and ascending colon, and tightly girt by the margins of the ileo-cæcal valve; the constricted part was highly congested, breaking down under the finger, and almost in a state of mortification.

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KING'S COLLEGE HOSPITAL.

REMOVAL OF NECROSED BONE, WITH SUBSEQUENT EXCISION OF THE KNEE-JOINT, IN A LAD AGED FOURTEEN; RECOVERY.

(Under the care of Mr. FERGUSSON.)

A CONSIDERABLE period has elapsed since the subject of excision of joints was thoroughly illustrated by the record of numerous cases in our "Mirror," and since then the operation has met with the attention that its importance demands, and is now frequently resorted to in suitable and well-selected instances in many of our metropolitan and provincial hospitals. If we have not recorded all those in which it has been done in London, it is because our space would not allow it; but we now give the details of nine cases of excision of the knee, taken indiscriminately, for the purpose of showing the nature of their progress and final result, and of again drawing attention to the subject generally. The consideration of excision of the hip-joint we shall reserve for another occasion.

With respect to the knee, we refer with much satisfaction to the memoirs of Mr. Butcher, of Dublin, who has so zealously labored to advance this branch of surgery, of Mr. Humphry, and of Mr. Price, who still more lately has been busy in the same field of research. We feel satisfied that if correct statistics of the knee could again be collected, they would show a very fair amount of success, for the reason, that the operation is better understood now than when first revived by Mr. Fergusson some years back. It is now undertaken with more confidence and its simplicity is found to encourage those surgeons to repeat it who have once put it into practice. We regret to say, however, that in two or three of our hospitals, amputation still appears to be the rule, even in patients whose knees could be excised with every possible advantage. As a set-off to this, there is a disposition to excise the hip in preference to the knee, on the ground that it is likely to prove a far more successful measure.

To speak of particular points in connexion with excision of the knee, it seems to be questionable whether the operation should be resorted to in the young, because the affected limb, after the loss of main joint, does not grow proportionately with other parts of the body. This has been found to be true in some cases; nevertheless, the shortened limb with a high-heeled shoe is preferred by the patients themselves to going about with a single leg. It would appear that there is scarcely a disease of the articulation, excluding of course anything in the shape of malignancy, for which excision may not be practiced. It may be done for even extensive necrosis; indeed, we can call to mind other instances besides the subjoined wherein Mr. Fergusson adopted this mode of treatment with decided advantage; and we have the recent experiments of M. Ollier, of Lyons, to prove that if the periosteum be left entire in the vicinity of joints, it will reproduce bone.

At one time the patella was allowed to remain, because it added support and strength to the knee; but subsequent experience has tended to show the advantage of its removal. Its retention is still a subject for consideration.

There are several examples of excised knees at the present time under treatment, independently of those which we now bring forward. Amongst them is a patient in King's College Hospital, upon whom Mr. Henry Lee performed the operation on the 30th June; and another, a girl in the London Hospital, operated upon by Mr. Curling on the 21st June. To show the rapidity with which the parts unite after excision, we may mention that a patient whose elbow was excised by Mr. Curling on the 28th of June by means of the longitudinal incision, had the wound perfectly united within a fortnight. We have known such speedy results to occur in the knee.

The great inducement to perform excision of the knee-joint at the present day is the fact that the percentage of deaths consequent on this operation is much less than that attending amputation; a reference to the memoirs of Mr. Butcher and Mr. Price will satisfactorily prove the truth of this. At Guy's Hospital, Mr. Bryant has shown, the per-centage of deaths in *pathological* amputations is 1 in 5·5, the same as in excision of the knee; whilst that in *chronic disease* is 1 in 7, being somewhat more favorable. The statistics of amputations elsewhere, taken generally, will not give such favorable results as these.

The notes of the following case were furnished by Mr. Francis Mason, late house-surgeon to the hospital.

E. H——, aged fourteen, was admitted Dec. 27th, 1859. He stated that in May, 1858, he was being carried down some steps, when his knee came in contact with the iron railings; the joint was slightly painful at the time, but he thought little of it, and it improved by fomentations and rest. About six weeks after the accident, however, he experienced a good deal of sharp, shooting pain in the joint, with considerable swelling. He sought medical advice, but no remedies appeared to have a beneficial effect upon it. This state of things continued three months, when an abscess was discovered to exist in the joint, which was opened, and an immense quantity of matter evacuated. This gave him some temporary relief, but the knee had now become considerably flexed, obliging him to adopt crutches to enable him to get about. He continued much in this state up to the time of admission.

The patient is a pale, delicate, strumous-looking boy. He lies on his left side; the thigh being flexed on the trunk, the leg on the thigh. There are several sinuses in the region of the joint leading to bone; one, on the inner and lower part of the thigh, leads to an extensive bare surface of the femur. The patient has no brothers or sisters; father and mother healthy. No lung affection; other functions of the body natural.

Jan. 7th.—The patient having been narcotized, Mr. Fergusson proceeded to remove a piece of the shaft of the femur about six inches in length, by an incision of two inches, made at the lower end of the thigh. The removed portion was easily detached, and found to be necrosed.

8th.—Has had a good night; complains of slight thirst. Limb rather uncomfortable; pulse 106.

10th.—Wound suppurating healthily; the patient says the limb is not so painful as before the operation; appetite good.

Feb. 2nd.—Has gone on well since last report; eats, drinks, and sleeps well; is anxious to have his leg put straight.

March 3rd.—To-day the operation of excision of the knee-joint was performed by Mr. Fergusson, the patient being under the influence of chloroform. The H incision having been made in the integuments, sufficient of the ends of the femur and tibia was cut off to bring the limb in the straight position. The patella was removed. There was very little hæmorrhage during the operation, no vessel requiring a ligature. A splint having been applied, the patient was sent to bed.

4th.—Has had a restless night, the limb having been very painful, but the pain has been much mitigated by an opiate draught; pulse 120.

5th.—Is much better to-day in health, but the leg continues to give great pain at intervals. To have three grains of sesqui-carbonate of ammonia in an ounce of decoction of cinchona every four hours.

10th—Wound discharging healthily; no bad symptom; appetite good; bowels regular; all pain has disappeared.

20th.—Is still going on well, the wound discharging a thin, serous fluid, mixed with pus; splint removed; the joint seems firm; splint reapplied.

May 1st.—Gutta-percha splint applied to the back of the leg.

9th.—Discharged to go in the country.

ST. THOMAS HOSPITAL.

SIX CASES OF EXCISION OF THE KNEE-JOINT, PERFORMED IN 1859, FOLLOWED BY RECOVERY IN FIVE.

(Under the care of Mr. South, Mr. Solly, Mr. Le Gros Clark, and Mr. Simon.)

The operation was performed in pretty much the same manner in all of the following cases, as we learn from Mr. Allingham, Surgical Registrar to the hospital, to whom we are indebted for their brief details. Chloroform was given, and the joint was opened by an elliptic incision, which included the patella in the flap. The ends of the bones and the joint surface of the patella were removed by Butcher's saw, and the limb was put up in a slightly bent iron back splint. Liberal diet and stimulants were given, and all the patients had cod-liver oil and some preparation of iron.

Case 1.—A strumous, delicate man, aged thirty-seven; had disease of the sternum and ulceration of the cartilages of the left knee-joint. He suffered much pain, his rest was disturbed, appetite bad, and his health generally broken. Two sinuses, connected with the joint, discharged a watery pus. Excision was performed by Mr. South Nov. 5th, 1859. The cartilages were found extensively eroded, and the head of the tibia secondarily affected to a slight extent. At first, after the operation, his health improved; the wound united in part, and healthy suppuration was established: but towards the end of February diarrhœa of a very obstinate character set in, with night-sweats. By the end of March his condition was by no means satisfactory; there was no apparent union of the bones, his diarrhœa continued despite the use of various astringents, he was sick at times, and his appetite was capricious. The wound did not discharge excessively, and it looked healthy. From this time there was but little alteration in his condition, and certainly none for the better, and he went out, at his own particular request, on the 2nd of June. There was then no amount of bony union, the wound was discharging a tolerably healthy pus, and he did not suffer pain. He died a short time after leaving the hospital.

Case 2.—A very strumous-looking boy, aged six, with chronic ulceration of the cartilages of the right knee-joint, the tibia being dislocated backwards. He was hectic; suffered much pain; and there was a discharging sinus connected with the joint. Excision was performed by Mr. Solly on the 9th of November, 1859. The cartilages were extensively eroded and the ligaments destroyed. After the operation he improved at once, never having a bad symptom. The wound healed; he gained health and strength, and left the hospital with scarcely any perceptible shortening of the limb, being able to walk with ease and comfort.

Case 3.—A delicate, scrofulous boy, aged eight, with chronic ulceration of the cartilages of the knee-joint; free discharge from three sinuses. He was hectic and suffered much pain. Excision was performed on the 5th of March, 1859, by Mr. Solly. There was considerable erosion of the cartilages, and false membrane in large quantities; but no disease of bone. The wound united in great part by first intention; his health improved; he slept well; and his appetite was excellent. He left the hospital quite stout and well; the limb was only half an inch shorter than its fellow, and he could walk with ease and rapidity.

Case 4.—A strumous boy, aged twelve, with long-standing suppuration in the knee-joint and several discharging sinuses. He was much out of health, and suffered greatly. Excision was performed by Mr. Le Gros Clark on the 12th of March, 1859. The cartilages were found to be in great part removed, and there was some secondary disease of the head of the tibia. A considerable portion of the wound united by primary intention. He slept well, and took his food with relish. During the progress of the case he had a slight attack of erysipelas, and an abscess formed over the ankle. Despite these drawbacks, the result of the case was favorable; and when he left the hospital there was firm bony union, and only a small portion of the wound uncicatrized. The limb was but slightly shortened.

Case 5.—An emaciated, sickly girl, aged six, with scrofulous disease of the knee-joint. She had suffered much; slept badly; and had but little appetite. Excision performed Nov. 12th, 1859, by Mr. Simon. The cartilages were eroded, and there was softening of the end of the femur. For a few days after the operation her condition was very critical, but when suppuration was established she improved, slept better, and was more cheerful. She was sent from the hospital to the Margate Infirmary. There was firm bony union, and only a slight amount of ulceration in the line of the incision when she left St. Thomas's.

Case 6.—An unhealthy, pasty looking man, aged twenty-three, with long-standing disease of the knee-joint. After his admission two incisions were made and considerable quantities of pus escaped. He did not improve much, and excision was performed Nov. 16th, 1859, by Mr. Simon. There was extensive ulceration of the cartilages, and superficial caries, dependent upon a small sequestrum in the head of the tibia. He improved in health after the operation, and a good deal of the wound united by first intention. A counter opening was required, when suppuration occurred, to give exit to some retained pus. When he left the hospital there was firm union of the bones, he was able to get about, and was in very fair health.

ROYAL FREE HOSPITAL.

STRUMOUS DISEASE OF THE KNEE-JOINT; EXCISION; RECOVERY WITH A SOUND, ANCHYLOSED, AND USEFUL LIMB.

(Under the care of Mr. Gant.)

The two following cases sufficiently speak for themselves. They make up the nine mentioned in our previous remarks, and with but one unsuccessful result out of that number:—

John P——, aged eighteen, was admitted on Oct. 19th, 1859. The patient is a strumous, unhealthy-looking subject; a coal-porter. While following his occupation about four years and a half ago, a large piece of coal fell on his right knee, and occasioned pain for some days, after which he resumed his work, although the joint was much swollen, and still painful. He continued to work during the ensuing three months, the joint remaining swollen, and latterly the hamstring muscles contracted so as to draw the limb backwards to nearly a right angle with the femur. He then went under treatment at the Westminster Dispensary for four months, during which period the muscles gradually drew the heel up to the buttock. He afterwards resorted to St. George's Hospital, where he experienced some relief, under the care of Mr. Hawkins, and was discharged at the end of three months. Thence he went to St. Mary's Hospital, and was a patient for more than eight weeks, under the care of Mr. Lane. Subsequently, at the Westminster Hospital, he remained for ten months, under the care of Mr. Guthrie, when he was discharged. After six months' suffering he was again admitted into the same hospital, and continued under treatment for two months more. At length he sought relief at the Middlesex Hospital; but having remained for three months, without any improvement, he left the hospital. Eventually he came to the Royal Free Hospital, and was placed under the care of Mr. Gant on the 19th of October last.

The joint was found to be uniformly swollen, but not so much as to obscure its outline. A thin unhealthy discharge issued from two or three sinuses which led into the joint, and the patient was much emaciated. His general health having been renovated so far as the local disease and lengthened illness allowed, Mr. Gant excised the joint under chloroform on Oct. 31st. By a transverse and slightly curved incision below the patella, and extending from one condyle of the femur to the other, the joint was fairly laid open. The patella was then removed, although in a sound condition, and a slice of the femur and tibia, both of which were partially bare of cartilage, were sawn off. The femur was most diseased, and a second slice was taken from it, until the rose-colored bleeding bone was reached. All the diseased bone having been thus got rid of, the surfaces of the femur and tibia were seen to be well adjusted to each other, and the edges of the incision brought together with sutures of fine silver wire. No vessel required ligature. The limb was at once placed upon an extended Macintyre splint, of such length as to allow the femur and tibia to be in easy apposition without being much pressed together by the foot-board. Broad strips of adhesive plaster were then drawn around the limb, a splint applied above and below the knee, and a bandage from the foot upwards and from the thigh downwards, leaving the knee uncovered, around which were placed strips of wet lint. No side splint was used.

No unfavorable or unusual symptom followed the operation. On the eighth day some hæmorrhage occurred, which was arrested by the application of ice.

Dec. 17th.—The splint was removed, and union found to have taken place; the limb was replaced; general health much improved.

Jan. 2nd.—Union was more firm; health continues to improve, and his trembling agitation has subsided.

27th.—Union more firm; limb replaced on a short posterior splint.

From this time the patient sat up in bed daily; but it was deemed advisable not to allow him to try the leg much. When the weather became warmer, he took gentle exercise, with his leg suspended in a sling. He left the hospital with a sound and useful limb, having been allowed to remain an in-patient until he could be admitted into the Margate Infirmary to thoroughly re-establish his health.

EXTENSIVE CARIES OF THE RIGHT KNEE-JOINT; EXCISION; RECOVERY, WITH FIRM ANCHYLOSIS, IN TWO MONTHS.

(Under the care of Mr. Gant.)

Elizabeth D——, aged thirty-three, married, on September 29th, 1853, while walking down a gentle descent, slipped over some rotten pears, and caught the heel of her boot in a grating, whereby the knee was wrenched inwards, causing severe pain. Considerable swelling ensued, which never subsided; but the articulation continued movable for three months, at which time, the patient having scrubbed two or three rooms, more intense pain attacked the joint, which soon became fixed. This crippled state continued without any improvement, although leeches and blisters were used from time to time after the injury. The general health remained unimpaired up to October, 1858, when she experienced severe pain, apparently rheumatic, extending throughout the whole limb. This subsided under treatment, but the practitioner to whom she had last applied candidly told her that the case was incurable otherwise than by amputation; and by his recommendation she came to the Royal Free Hospital on September 12th, 1859.

The joint was considerably and uniformly swollen. Three sinuses, one in the popliteal space, discharged a thin ichorous matter, and the limb was bent towards the buttock, but was movable with a grating noise, such as plainly bespoke destruction of the articular surfaces. The constitutional irritation was proportionate to the six years' suffering the patient had endured. She was not so much emaciated, but passed sleepless nights, trembled, and was always in tears.

On October 19th, chloroform having been administered, Mr. Gant excised the joint by making the same incision as in the preceding case. The head of the tibia was sawn off to the depth of half an inch; a thicker portion of the femur was taken away, and the cancellated structure scooped out for more than an inch, so as entirely to remove all diseased bone. The patella was also removed. The subsequent steps of the operation and adjustment of the splint were precisly similar to those adopted in the other case.

The general health improved rapidly after this operation. The patient gained flesh and spirits, and progressed without a single unfavorable symptom. At the end of eight weeks the splint was finally removed, and so firm was the anchylosis that no other was applied, the limb being merely bandaged from the toes upwards to prevent any tendency to swelling on first moving about.

The patient could rest her whole weight on the operated limb, and she left the hospital in time to eat her Christmas dinner at home.

UNIVERSITY COLLEGE HOSPITAL.

INJURY TO THE LEFT KIDNEY, FROM CONTUSION OF THE ABDOMEN AND THORAX; HÆMATURIA AND COLLAPSE: RECOVERY.

(Under the care of Mr. Erichsen.)

The presence of blood in the urine, following the receipt of any injury about the loins, clearly points to the kidney as the *source* of it, as is illustrated by the following case, the notes of which were furnished by Mr Berkley Hill, house surgeon to the hospital. Notwithstanding the gravity of the general symptoms, the man made an excellent recovery. In proof of the fact that the blood does come from the kidney in these cases of injury to that viscus, we may refer to an instance we saw in the same hospital some years ago. A man was admitted, under Mr. Erichsen's care, who had sustained an injury in the loins from a railway buffer. He passed much blood in the urine, and had all the symptoms of injury to the kidney. He survived some weeks, his death being the result of an attack of pneumonia, and at the autopsy a distinct cicatrix was found on the surface of the left kidney, where the laceration of its substance had primarily occurred.

George W——, aged twenty-eight, a carman, admitted on the 1st of May last, under the care of Mr. Erichsen; on which day, whilst driving his van, he slipped off his seat, and fell under the wheel, which rolled against his side, and probably over his body. On admission, the patient was almost unconscious, suffering under great collapse, being pale, cold, covered with clammy sweat, and with a very feeble pulse. Shortly after admission, he vomited repeatedly biliary matter and mucus. No blood, however, was detected under the microscope.. He complained of great pain and tenderness over the left hypochondriac and lumbar regions, where the ninth and tenth ribs were fractured; some indistinct emphysema existed here also. The vomiting and prostration continued until the following evening, when he became flushed, thirsty, his pulse hard and rapid and his bowels constipated, Some cough also set in, and friction sound was audible at the base of the left chest. The urine during the first three days was dark-brown in color, and opaque, the discoloration being due to blood discs, and also to fine granular blood-casts of the uriniferous tubes. After the third day, the urine no longer retained its dark appearance, though some blood discs were visible under the microscope, and some traces of albumen remained. At the end of a fortnight, the man could sit up in bed without pain. By this time all abnormal appearance in his urine had ceased. On the 25th of May he was discharged, quite able to walk and take a long breath without pain, and having no tenderness on pressure over the left kidney. The urine also was perfectly free from albumen, pus, blood-discs, or casts of uriniferous tubes.

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ROYAL FREE HOSPITAL.

EPISTAXIS, GIVING RISE TO HÆMATEMESIS, THE HÆMORRHAGE PROCEEDING ALMOST TO FATAL SYNCOPE.

(Under the care of Mr. Weeden Cooke.)

When bleeding from the nose and vomiting of blood are co-existing symptoms, it is important to ascertain if their origin is distinct; for whilst attention is directed towards arresting the latter, so much time may be lost as to bring about a fatal result from the former. The occurrence of a double bleeding of this kind is probably one of the rarest complications to be met with. In the present example, the simulation of real hæmatemesis was so natural as at first to mislead; a careful examination of the fauces, afterwards, showed the blood to be trickling down the pharynx from the back of the nose, coursing onwards to the stomach, whence it was vomited. The true nature of the case being thus apparent, the nostrils were plugged with success, but not before a large quantity of blood had been lost. We are favored with the notes of the case by Mr. John D. Hill, house-surgeon to the hospital.

Thomas G——, aged twenty-three, a strong, healthy-looking man, was admitted on the 10th of February, at ten A.M., vomiting blood and bleeding from the nose. It was stated that he had been fighting, and had been considerably knocked about by his opponent, as his appearance would testify. It was also said that his antagonist had, after having knocked him down, jumped upon his body; and with regard to his previous history, it appeared that he was subject to attacks of epistaxis, particularly after inebriation. These circumstances having been taken into consideration after the examination of the patient, it was determined to administer the acetate of lead and opium combined, with the local application of cold to the epigastrium. The blanched condition of the patient, together with the state of collapse and vomiting, at first indicated treatment for hæmatemesis, which was accordingly adopted. Had this not been so, the bruised and swollen condition of the nose and face, with the epistaxis (which, upon examination, was not considered at first to be the source of the hæmatemesis), would have suggested the propriety of plugging the posterior nares. The epistaxis subsided in a short time, but the vomiting continued at intervals, although not so great in quantity, after the second dose of the medicine had been taken. At two o'clock the epistaxis returned, as well as the vomiting. More than a pint and a half of blood was ejected from the stomach, and the patient appeared *in articulo mortis*, the pulse and breathing being almost imperceptible. The house-surgeon was summoned immediately, and the patient again carefully examined. Upon exposing the fauces to a good light the true source of the hæmorrhage was discovered. The blood was seen trickling down into the pharynx through the posterior nares, which were immediately plugged, as well as the anterior. Brandy, combined with twenty-minim doses of spirit of turpentine, was given every twenty minutes. The hæmorrhage ceased immediately after the operation, and in twenty-five minutes the circulation began to recover itself. The patient progressed favorably for twenty-six hours, when reaction set in rather briskly. On the third day the secretions were attended to, and the digestive apparatus restored to health. The plugs were removed without the least disposition to the recurrence of hæmorrhage. The patient upon the fourth day took food (animal), and continued daily to improve and regain his strength. He was discharged convalescent on the 16th February.

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NORFOLK AND NORWICH HOSPITAL.

CASES OF MYELOID DISEASE.

(Under the care of Mr. W. Cadge.)

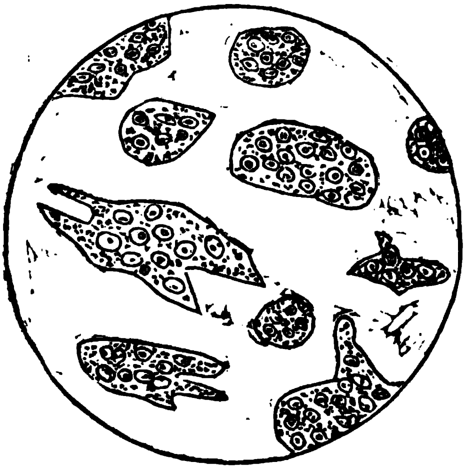
(*Reported by* Mr. Charles Williams, House-Surgeon.)

Case I.—E. S——, aged forty-five, married, living in Norwich, was admitted into the above hospital July 9th, 1859, suffering from disease in the left knee. She states that fourteen months ago she had severe pain in the knee and calf of the left leg. A week or two subsequently she fell down stairs, but does not remember to have injured this joint. Soon after this event, the knee began to enlarge. It became painful, hot, and she could not move it. She noticed that the veins on the outer side were larger than they ought to be. She was obliged to keep in bed for three months, during which time she was under medical care; the joint was blistered, and iodine paint applied, without any benefit resulting therefrom. She was now induced to get about; but was soon obliged to take to bed again, where she remained until her admission into this hospital. The joint has enlarged gradually, though of late it has increased somewhat rapidly in size. The patient is a short, spare woman, the mother of two children. She has had uninterrupted good health until the commencement of her present complaint. Her family are not prone to any particular disease. She has never had rheumatic fever. The catamenia were regular until a year ago; since then they have been irregular and scanty. The appetite has been and is very good; bowels regular; urine of normal quality and quantity. The left lower limb lies on its outer side, and the knee is flexed at an obtuse angle; it presents, in comparison with the opposite one, a remarkable difference in size and shape. The lower end of the os femoris seems to be expanded into an oval tumour, which subsides as it extends upwards; it is of tolerably firm, even, and somewhat tense character, and is excessively painful when the slightest manipulation is practised. The skin is not discolored, but is tense and polished, and presents several large and tortuous veins coursing over it. The tumour measures sixteen inches in circumference; the corresponding part of the opposite limb is but twelve inches and a half. It projects so much at the inner condyle, and the head of the tibia is directed so far outwards, as to give the appearance of partial dislocation of the end of the femur inwards; and the extreme mobility of the limb, apparently at the knee-joint, tends in a great measure to strengthen this view of its condition. She cannot straighten her leg in the slightest degree, and is obliged, when necessary, to raise her leg with her hands. The patella is movable. The patient says she is seldom free from pain, which is dull and aching, and sometimes darts through the joint. She is often awoke at night by its "starting;" the leg is atrophied, and the foot much swollen. There is no enlargement of any superficial absorbent glands about the body, except one inguinal gland on the left side, which has increased to the size of a horse-bean. The heart and chest sounds are perfectly healthy.

July 15th.—Having been placed under the influence of chloroform, the flap amputation through the thigh was performed. During the first seven days, there was an entire absence of either healthy or unhealthy inflammation in the flaps, and the stump looked cold and lifeless. However, on the eighth day, reaction commenced, the stump healed well and soundly, and the woman was discharged cured on the 27th of August, forty-two days after the operation.

Examination of the tumour.—A section showed that the end of the os femoris was destroyed to the extent of four inches and a half of its length, and replaced by soft, red, pultaceous material, which was enveloped in a sac consisting of periosteum. This was continuous with the shaft of the bone, which ended abruptly by a jagged termination in the midst of the soft tumour. The cartilages were perfect, expanded, or rather flattened, and thinned, and in places looked black, the contents of the tumour appearing through the attenuated portions. The tumour was round in form, and measured at its widest part eleven inches in circumference. Its outer wall was so tenuous, that it was easily, though accidentally, broken into. Its inner wall contained a thin plate of bone. The head of the tibia, as well as the patella, were healthy. There was no displacement of parts at the knee-joint, as was supposed. This deceptive appearance was due to the loss of support in the lower part of the thigh, occasioned by the absence of its corresponding portion of bone.

A portion of the matter, examined microscopically, presented the characteristic cells of that recently-recognised growth, the myeloid tumour. The cells were polynucleated, and of various sizes and shapes, the greater number being large and oval; some were angular; others sent out numerous processes from their sides. Fusiform and fibro-plastic cells were also detected.



This patient was visited recently. She was in excellent health, and there was no recurrence of the disease.

The notes of the following case, which occurred in private practice, are kindly furnished by Mr. Cadge from his case-book:—

Case 2.—*Myeloid Disease in the Head of the Tibia.*—Mrs. G——, a married woman, aged twenty-nine, came to Norwich in March, 1854, for the purpose of submitting to amputation of the thigh. I first saw her about twelve months before. The knee was then greatly enlarged; it measured fifteen inches in circumference, was generally hard, but at some points it had a soft elastic feel; there were cicatrices in several places, the effect of issues which had been made at various times. Upon close examination, it appeared to me that the joint itself was not affected, but that the enlargement was caused by disease of the head of the tibia. The os femoris could be traced down to its condyles, and was of the natural size. The patella was pushed up, and was felt at the upper part of the tumour. There was neither fluid in nor distension of the synovial capsule at the upper and anterior part of the joint. On tracing the tibia from below, it was felt gradually to spread out continuously into the tumour; the head of the fibula could be made out on the other side, apparently not diseased. The disease commenced about six years previously, and just after her confinement, with pain and slight swelling. It was treated for a long time as a rheumatic affection, and subsequently as a common disease of the joint. Amputation was proposed to her a year or two ago by her medical attendant, but to this she would not consent. She has been able to get about with the aid of a crutch; but during the last few months the joint has been so painful, and her health has so much deteriorated, that she resolved to lose the limb.

March 28th.—I performed amputation, by anterior and posterior flaps, at the lower third of the thigh. Very little blood was lost. The femoral vein was very patent, and continued to let blood so long after the tourniquet was removed as to render it necessary to secure it with a ligature. The stump was dressed immediately after the operation, and in the evening she was as comfortable as could be expected.

29th.—Slept without opium; no pain; pulse 130; tongue clean.

31st.—Pulse 130; sleeps tolerably well, making no complaint of stump.

April 1st.—Pulse 126; tongue clean; bowels opened yesterday. The stump was uncovered today; it was tender, and matter escaped freely from one corner. Ordered beef-tea and wine.

3rd.—Discharge free, but not great in quantity; pulse 104. Continue wine and beef-tea.

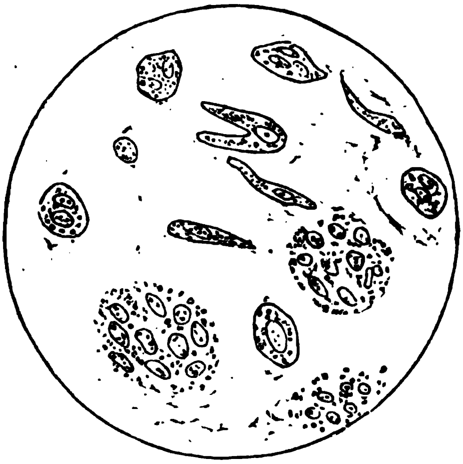
5th.—Better in every respect; one ligature came away.

9th.—Stump looking well; discharge somewhat diminished; another ligature came away; pulse 104; eats and sleeps well, and is very cheerful.

From this time she progressed favorably, regained strength and appetite, and the stump healed perfectly and well, so well as to retain several ligatures for some time; three or four were forcibly removed, and it was evident they were retained simply because the knots could not pass through the narrow canals in which the threads lay. The ligature on the femoral was left until the sixth week, and then it required some force to remove it. She returned home at the end of the seventh week.

Examination of the limb.—The tumour is round, and enclosed in a fibrous envelope, which has become partially osseous, and which limits the diseased mass in every direction. On section, the upper fourth of the tibia is seen to be replaced by a vascular tumour of soft pulpy consistence; the greater portion resembles blood coagula, and has a tolerably well-marked laminated appearance; the remainder is of a buff color and pultaceous. A number of fibrous processes pass across the tumour in all directions, and form so many loculi, which vary in size from an orange to a chestnut; and in these the material is deposited. Over the upper part which borders the joint a thin layer of cartilage, apparently healthy, and corresponding with the head of the tibia, only intervenes between the articulation and the diseased structure. At the opposite extremity the shaft of the tibia terminates abruptly and unevenly; from this the periosteum spreads out on all sides, and forms the enclosing sac of the tumour. There is no sign of inflammatory action within the joint. The patella and os femoris are healthy.

A portion of the soft material was submitted to microscopical examination a short time ago. No distinct myeloid cells were detected, but there were numerous masses of nuclei and granular matter clustered together, having no defined cell wall. This altered appearance of the myeloid cells was most probably due to the action of the spirit in which the specimen had been preserved since its removal in 1854. There were also seen rounded cells of various sizes, having two or three small nuclei and granular matter; nucleated fibro-cells; pyriform, caudate, and branched cells in every form, containing one large or two smaller nuclei, also much granular and oily matter.



The case would be incomplete were it not recorded that the woman is in good health, and has had no return of the disease.

Remarks.—The chief reason for publishing these cases is, that they may be added to the few already recorded in the medical journals, especially as they are good examples of true myeloid tumour uncomplicated with any other disease. This singular heterologous growth, which seems to partake of the characters of both innocent and malignant tumours of bone, has only recently been the subject of research, though evidently known years ago to Brodie and Stanley, in whose works accurate descriptions of the disease may be found; at the same time, for our present knowledge of this disease we are particularly indebted to Paget, Wilks, and Gray.

Clinical Records.

RETENTION OF URINE FROM INFLAMMATORY STRICTURE.

The chief point of interest in the subjoined case was the impossibility of passing an instrument into the bladder, on the patient's admission shortly after midnight. There was distension from an inflammatory stricture, combined with some amount of spasm, arising from the patient's habits and manner of life. No resource was left but to puncture the bladder through the rectum, which gave him immediate relief; and after a few days the urine flowed freely through the natural passage, without the necessity of resorting to any special treatment for the slight degree of permanent stricture remaining. For the notes of the case we are indebted to Mr. John D. Hill, house-surgeon to the hospital.

Chas. L——, aged 26, was admitted into the Royal Free Hospital on March 19th, 1860, with retention of urine from inflammatory stricture. The patient stated that he had had difficulty in passing urine for more than two years, and always in a very small stream, and upon one or two occasions had suffered from retention, which, however, had been relieved by the catheter. These attacks invariably resulted from exposure to cold after a debauch. He was admitted at two A.M., suffering most acutely with the distended bladder, which could be seen and felt above the pubes. Instruments were introduced without success by the house-surgeon; a warm bath with a dose of opium were given, and an instrument again tried without avail. All means having fairly failed to afford relief, the distended bladder was punctured by Mr. Hill through the rectum, and upwards of four pints of urine were removed.

The patient was placed under the influence of alkalies and sedatives, and during the second day the stricture dilated somewhat before the point of a conical sound, although continued pressure kept up for some time would not allow its complete passage through the cartilaginous mass. The urine continued to pass per rectum until the third day, when the instrument was removed, the natural channel having become again pervious. The stricture was situate at the termination of the spongy portion of the urethra, beginning just above the bulb, and extending about two inches backwards to the membranous part of the canal, of dense structure, excessively resisting, and grasping the point of the sound when introduced.

March 22nd.—Urine passes in a very good stream; there is some tenderness about the seat of the stricture; bowels tending to constipation.

24th.—Aperture in rectum has healed very satisfactorily, and the urine continues to flow by the natural channel.

26th.—Is feverish, with loss of appetite and impairment of digestive organs.

28th.—Much improved. Instruments were introduced; the urine is rather freer than before, and the progress of the case, although slow, is satisfactory.

UNUSUAL CASE OF STONE.

A very curious and interesting case of stone was submitted to the ordinary lateral operation, for the second time, on the 7th inst., by Mr. Fergusson, at King's College Hospital. The patient was a lad aged fourteen, who had been cut for stone ten weeks before by the same surgeon, and two calculi of irregular shape extracted, but evidently portions of one stone, which weighed together nearly four ounces. These had not been detected before his admission. He went on well for two weeks, when he was suddenly seized with pain about the neck of the bladder, and this was followed by discharge of matter from the wound and also from the urethra. The pain extended up along the ureter to the kidney and right side of the belly; he, however, got well in two or three days. As the urine ceased to flow from the wound, he complained of pain at the neck of the bladder; and Mr. Fergusson again detected, with difficulty, a stone, which seemed to be too large to have passed from the kidney in such a short time; and it appeared doubtful to him whether he had not left a fragment in the bladder. He believed it better to submit him to another operation, and a long-finger shaped stone was removed, which broke in two in getting it away. It was formed over a nucleus of the size of a Barcelona nut, the diameter of which was nearly equal to the short axis of the calculus itself. It appeared most certainly too large a stone to have formed in the bladder in so short a time as ten weeks. The nucleus was evidently from the kidney, and may have given origin to the calculus at the lower part of the ureter, thus forming an abscess which had burst into the bladder. The patient has progressed very well, and will probably make a good recovery. We may remark that Mr. Fergusson cut through the old cicatrix, as we have seen Mr. Price do at the Great Northern Hospital on his second and third operations upon the same patient.

RHEUMATIC PERICARDITIS.

A well-marked example of this common result of rheumatism was observed lately in St Bartholomew's Hospital. The subject of it (now convalescent) was a coalheaver, aged seventeen, who was admitted on the 30th of January, under Dr. Farre's care, with a second attack of rheumatism, the first having occurred four years ago. The present attack commenced in the heart, for there was very little, if any, affection of the joints—in fact, no attention was paid to them in consequence. The lad was very pale; there was a good deal of cardiac dulness, but no effusion into the pericardium, and no distress. Friction-sound was general over the heart. This gradually ceased, commencing at the apex, and thence proceeding towards the base, so that on the fifth day it had disappeared. On the sixth, however, it could still be heard over the base. The pulse has been regular, and beats 100. The substance of the heart itself was unaffected. He was put upon digitalis and antimony for the first four or five days, to keep the action of the heart moderate; and calomel and opium were given; but the gums did not get sore even with the use of mercurial ointment. A blister removed all the pain. By the 5th of February, the friction-sound, as stated, had wholly ceased, but it returned at the base on the 6th, showing that the probable adhesion of the opposed surfaces was not complete. Dr. Farre believed that more benefit was to be derived, in a case of this kind, from blistering than leeching, and accordingly repeated the former, with mercurial liniment. At this time the pulse had fallen to 84. On the 13th of February, the friction sound was still present at the base, heard on a level with the nipple close to the sternum; pulse 80, regular; and there was a little crepitation heard at the base of the right lung posteriorly, but not in the left. The calomel had been left off because it had purged him; it was, however, renewed in doses of a grain, with a sixth of a grain of opium, three times a day. He commenced to improve after this, and the friction-sound wholly disappeared; he was then enabled to sit up, and, although pale, improved very rapidly in his general health.

As showing the sad consequences of rheumatism, we may just refer to two other cases, also under Dr. Farre's care. A little girl, ten years of age, was admitted, with general anasarca and ascites of six weeks' duration, from diseased heart. It appears she had an attack of rheumatic fever four years ago, and sixteen months afterwards a second, which were associated with heart symptoms. Lately she had a systolic murmur at the apex and base of the heart, and over the aorta; it could be heard, also, all over the chest. There was mitral valvular disease as well; the urine albuminous, and abdomen much swollen. Under the influence of elaterium and confection of cream of tartar, all the anasarca has vanished, the ascites is less, and she is sitting up, much improved, and does not look like the same child. She subsequently took gallic acid, and then the sesquichloride of iron, with benefit.

In the next bed to hers is a young woman twenty-two years of age, who had her first attack of rheumatism at the age of eight years, and her second when she was fourteen, with heart disease. She was also in the hospital some months before with the old heart disease, at which time the cardiac sounds were double, representing four beats, as it were, from inflammation of one ventricle. Now she has bronchitis, besides her cardiac and rheumatic affections.

PRESERVATION OF THE HIP-JOINT BY THE REMOVAL OF DISEASED BONE.

A most instructive case of apparent hip-joint disease, in a married woman, twenty-three years of age, was admitted into University College Hospital in February. The patient was a delicate, pale, and emaciated person, who had been sent up from Kent to have the hip-joint excised. She had been the subject of strumous disease in early childhood, particularly around the ankle-joint, which had caused shortening of the affected limb. In other respects, her general health was not bad. About two years ago, she complained of pain in her right hip-joint, which was shortly after followed by an abscess on the upper and outer part of the thigh, simulating hip-joint disease. The abscess burst, and there remained a fistulous aperture just below the insertion of the tensor vaginæ femoris muscle, leading apparently to the hip-joint, but in reality not so. On careful examination, under the influence of chloroform, the mobility of the joint was found to be perfect, as it could be freely moved in every direction, with an absence of any grating sensation. The head of the thigh-bone was in its natural situation, and the shortening of the limb was clearly the result of the ankle disease in early life. A probe entered into carious bone, but not into the joint itself, and the disease appeared to be limited to the great trochanter. There was no evidence of its extension within the capsular ligament, although very close to the joint.

If left to itself, Mr. Erichsen believed that the disease would extend upwards to the articulation, and he therefore had no hesitation in endeavoring to remove the affected parts of the bone. This case, he observed, resembled a class of cases very commonly met with—namely, caries of the cancellous structure of the head of the tibia, wherein the morbid action extended very close to the encrusting articular cartilage, but which latter escapes if the disease is removed in time, and the knee-joint is left intact. On laying open the parts, after chloroform was given, the condition suspected was found to be present. A cavity existed in the great trochanter, which was well cleared out by means of Marshall's osteotrite; but the disease actually extended some way up the neck of the femur, and was entirely removed, leaving a clean, smooth, hard, and healthy surface behind. This cavity was an inch and a half in depth. The posterior and outer edges of the trochanter were removed with forceps. The wound was now stuffed with lint, and the patient removed to bed.

SENSATION OF CRACKLING WITHIN THE JOINTS.

A **female**, aged thirty-six years, but looking much older, a housemaid, of spare frame and short stature, was admitted into St. Bartholomew's Hospital on the 6th of February last, under Dr. Farre's care, with general pains about her limbs and joints. She has been a sufferer from rheumatoid arthritis; and from her family history it appears that her father and uncle were subject to the same disease, or to gout, but which, she says, was rheumatic gout. Besides the general pain and distress present on her admission, she had a sensation of crackling within all the affected joints, especially well marked at the under part of the right knee, in the right ankle, in the left groin, and in front of the hip-joint; and at times she seemed as if she had not the power to move her limbs. This crackling of the joints commenced nine weeks before she entered the hospital, although she has suffered from her other affection for upwards of five years, with lameness of one of her legs from the same cause. She was examined by Mr. Lloyd to see if there were any loose cartilages, but none could be found. Dr. Farre believed that this singular condition must be owing to an altered secretion of the lining membrane. By the 13th of February she was much relieved from pain on the outer side of the hip by the application of belladonna to the sacrum, and, in a few days afterwards, all this crackling wholly disappeared, and she began to improve in every way under treatment, although she still remained a little sore and lame.

It may be observed, that the disease itself under which this patient was suffering is common enough; but the peculiar sensation experienced of crackling within several of the joints is a striking feature, and ought to be a rare circumstance when the great number of pathological states of the synovial membrane are taken into consideration. That Dr. Farre's opinion is the correct one would seem to be proved by the result of the treatment.

Some weeks later, a second example of this peculiarity occurred at University College Hospital, under Mr. Erichsen's care. The patient was a middle-aged man, with partial anchylosis of the elbow, the result of inflammation. He had been the subject of rheumatism eight years ago, and for the last two years has been unable to extend the left arm, although he can slightly flex it. There was clearly some effusion in the joint, and a very distinct crackling sensation, which Mr. Erichsen stated to be the result of it. In effusion into the sheaths of tendons, and in bursæ near joints, this crackling feeling is observed, and gives the idea, he remarked, of bands forming in different directions. It is noticed also in bursæ, when there are small bodies mixed with the fluid. Without giving the patient chloroform, the arm was flexed and extended with but little force, and, subsequently, not only was the position of the arm improved, but much useful motion was gained, with disappearance of the crackling.

PROTRUSION OF BONE BY GROWTH FROM THE END OF A STUMP.

When limbs have been submitted to amputation in childhood, it not unfrequently happens that, as the individual grows, so does the bone elongate itself in a proportionate manner, and then protrudes through the soft parts, after a time forming a conical stump. Instances of this we have already brought under the notice of our readers; and that the bone does grow is believed by many surgeons of high authority, amongst whom are Mr. Stanley, Mr. Curling, and others. An undoubted example of it was recently admitted into Guy's Hospital under Mr. Hilton's care. The patient was a healthy-looking girl, about the age of eighteen years, whose right arm had been amputated in childhood. The stump healed kindly, and remained healthy for some years, when it gradually became conical, and from the point protruded the humerus. Its appearance was like an exaggerated nipple somewhat drawn out. There was no retraction of muscular substance here, but clearly an outgrowth of bone. The soft parts were soft in spots, as if from the pressure on or stretching of some of the nerves; in fact, they could be marked by pins. The rest of the stump was healthy. Chloroform was given on the 24th of July, an incision was made on either side, freely laying open the stump, and three inches of the bone sawn off; the parts were brought together, and the girl is now doing very well.

WINE IN PNEUMONIA.

The great value of wine, brandy, and other stimulants, in almost any disease of an asthenic character, or even in forms of acute disease which take on a low or asthenic type, is constantly observed in hospital practice. It was strikingly manifested in a man thirty-six years of age, who was admitted into St. Bartholomew's Hospital on the 16th of April, under Dr. Kirkes' care, with pleuro-pneumonia of the right lung. He was brought in in an exceedingly low and feeble condition, with pulse 136, small and weak, and soft in character. Consolidation of the lower part of the right lung was discovered, together with friction-sound. He was put on small doses of grey and Dover's powder, and three ounces of wine. This brought the pulse down to 124 next day, and the wine was increased to six ounces in the twenty-four hours. On the 18th the pulse was 100, and on the 19th 98: and the symptoms generally became alleviated. On the 21st, two ounces of brandy were ordered in addition to the wine; and by the 23rd the solidified lung was undergoing resolution, fine crepitation being heard over the lately condensed portion. Dr. Kirkes reduced the brandy to an ounce per diem continuing the six ounces of wine; and the man got so much better that he desired more food. Subsequently to this his recovery was gradual and complete; the wine and brandy being apparently the chief agents in bringing about a restoration of the normal condition of the lung. The patient was a laborer, and a strong man when well; but depletion would have proved a fatal measure. In London, at any rate, the majority of such cases require a stimulating and supporting treatment throughout.

THE FREQUENCY OF HEMIPLEGIA.

The frequency with which the occurrence of hemiplegia is witnessed in our hospitals shows an amount of disease in the bloodvessels of the brain amongst the industrial classes that could hardly be anticipated. Owing, no doubt, to atmospheric influences, cerebral congestions are probably more common at particular seasons; for we notice an unusual number of cases admitted into one or other of our hospitals at such times. Thus, on the 23rd of January, we counted some seven or eight cases in the male and female wards of Dr. Farre alone, at St. Bartholomew's Hospital, nearly all being seized with paralytic symptoms, we may say comparatively within a few days of each other. They were not very severe cases, and some were first attacks. We select the following, which we have condensed from the notes of Mr. Edmond Strickland, one of the clinical clerks:—

James R——, aged thirty-two, was admitted on the 23rd January, with hemiplegia of his left side. He is a stout, healthy-looking man, muscular and thickset, of plethoric aspect. He was quite well on the 22nd, ate his food as usual, and went to bed quite comfortable. At half-past one in the morning of the day of admission an extraordinary sensation came over him, which he experienced particularly in the left side. He can move his left arm very slightly but its temperature is diminished, and when he gapes (which he does very frequently) the arm is drawn up; it is otherwise powerless, but sensation is nearly perfect, and there is no rigidity. The left leg he can move quite well. The tongue is drawn to the affected side, and the right side of the face feels stiff. He had slight pains in the head, between the shoulders, and over the loins for the last week, but so mild that he took no notice of them. About eight weeks ago, whilst drinking a glass of ale, he was threatened with similar symptoms; the face was drawn to one side, and the ale ran out of his mouth; the face felt stiff for about an hour, and then all the symptoms passed off, not recurring again till the present time. Now his vision is also affected; articulation is difficult; there is no rigidity of the left side, and very slightly diminished sensation. He is usually of a costive habit.

In a case like this the symptoms are slight and mild, and would seem to favor the belief that there is no effusion into the substance of the brain, but probably a mere local congestion. Dr. Farre treated him with mild stimulants of carbonate of ammonia in camphor mixture after the bowels were relieved.

On February 13th, we learned that the patient had improved so much, being able to move his arm about, &c., that the ammonia was omitted on the 10th, when contraction of the arm returned. It was therefore resumed, and he again improved in every way up to the 18th, when matters seemed to be stationary. Dr. Farre believed that the man required the benefit of air and exercise out of doors, and he was therefore discharged.

LIGATURE OF THE CAROTID FOR SUSPECTED ANEURISM OF THE OPHTHALMIC ARTERY.

We recollect seeing Mr. Bowman tie the carotid artery (about three years ago) for a supposed aneurism of the ophthalmic artery, in an elderly woman, at King's College Hospital. The patient had applied at the Moorsfields Ophthalmic Hospital for a noise in her head. A pulsation either within the orbit or the head had been heard for five months by herself, and also by her husband. Its origin, Mr. Bowman observed, was somewhat obscure, whether from a blow or otherwise, he could not say positively; but she had received a blow on the lower edge of the orbit, which might have produced a fracture and lacerated the vessel. The lower edge of the orbit was very uneven; possibly a fracture may have ruptured the coats of the ophthalmic or the internal carotid itself. He remarked that it was not difficult to determine the real nature of the disease. The eye was prominent and injected, and so were the other structures of the orbit. A pulsation was felt over the eye, then over the whole head, but the left side particularly, and a strong, loud bruit was heard. The only thing to be done was to tie the vessel; and this was performed on Feb. 27th, after the patient had been a week in hospital to prepare for it. She was by no means a favorable subject; she had lived a very hard life, subject to considerable excitement with her husband, and was frequently drunk. She had no disease of the heart or other vessels. The upper portion of the common carotid was ligatured sufficiently below the bifurcation to permit the formation of a clot, and was there easily got at. On the 6th of March the patient was going on well, the noises had disappeared, as also the condition of the eyeball, &c. Afterwards she died; and at the autopsy no aneurism was found to explain the symptoms present during life.

We have been thus particular in mentioning these facts to show how difficult it is always to make out correctly an aneurism within the orbit or head. Very recently another case of supposed aneurism of the ophthalmic artery was submitted to the same treatment, and so far it has been followed by good results in every way. Subjoined are the particulars, as kindly furnished us by Mr. William Wickham, house-surgeon to King's College Hospital:—

Susan L——, aged forty-one, admitted April 13th, 1860, with supposed aneurism of the right opthalmic artery. She states that she has generally enjoyed good health. On Dec. 27th, 1859, whilst washing some clothes, she was attacked by sudden pain in the right side of the head, followed soon afterwards by a "blowing" noise in the same part, both of which have continued ever since. The right eye gradually became protruded and swollen, with increased vascularity. In March, 1860, she was confined. On admission, the right eye is found to project forwards about a quarter of an inch, and she has a convergent squint of about two lines. There is complete paralysis of the right external rectus muscle. When told to look towards the right hand, there is seen to be a second convergent squint of the left eye. The conjunctiva of the right eye is very red and œdematous, the sulcus beneath the orbit being completely filled up. The right eye is presbyopic. She is able to distinguish a figure of a watch held at a distance of fourteen inches, but cannot read, being unable to recognise letters of a word at that distance. On pressing the fingers beneath the margin of the orbit, a faint and obscure pulsation can be felt. The veins of the upper lid are varicose. The supra-orbital artery beats naturally. On applying the stethoscope over the front of the eyeball, a loud, blowing murmur, synchronous with the radial pulsation at the wrist, is heard, as also over the right side of the head, though more subdued in character. It is also heard on the opposite side of the head, but in a much fainter degree; also at the right angle of the lower jaw over the course of the common carotid artery down to the root of the neck. The intensity of the murmur is diminished on compressing the common carotid, but the bruit is not altogether stopped. Heart sounds are quite natural, though occasionally she suffers from violent palpitation. The treatment adopted at the the commencement consisted in the administration of tonics and pressure of the carotids by means of the fingers. This pressure was kept up for about ten days, twice a day, for five minutes at a time, with the effect of completely stopping the throbbing and the pain for the time being. As this, however, gave no permanent relief, it was discontinued, and, for the temporary relief of the patient, irrigation and cold to the parts have been since applied.

From the date of her admission till June 15th she continued in much the same condition; but in the evening the prominence of the eye became much more apparent, with an increase of vascularity and pain to such an extent that Mr. Bowman determined at once to ligature the common carotid, and performed the operation on June 16th in the ordinary way.

The patient has proceeded favorably since the operation, with a relief to most of the symptoms complained of, and is at the present time (Aug. 23rd) in a fair way of recovery. The ligature came away on the seventeenth day, without hæmorrhage. The eye is still prominent, and the paralysis of the sixth nerve is permanent. A faint bruit is occasionally heard.

CIRCULAR AMPUTATION OF THE THIGH.

On the 19th inst at St. George's Hospital, Mr. Cæsar Hawkins removed the leg of a female at the lower third of the thigh, for extensive disease of the knee-joint. The patient has been a sufferer for five years the mischief slowly progressing until the articulation was wholly destroyed, spreading also upwards into the shaft of the femur. A large part of the lower end of this bone was completely necrosed, as was also the head of the tibia, the surface of which latter was covered by some loose osseous fragments. The cartilages were likewise destroyed, from ulceration and absorption. The present was one of those examples in which the morbid action had become too widely spread to warrant the expectation that any surgical proceeding short of amputation would afford relief. This was accordingly adopted, and successfully carried out by the circular method. The patient is going on most satisfactorily.

We may here observe, that the circular amputation is to some extent superseding the ordinary flap operation in hospital practice. It is now mostly employed by the surgeons at St. George's Hospital, and is preferred also at other institutions. The adoption of the circular method, or of that by flaps, is solely a question of taste and of dexterity on the part of the operator; for most writers on surgery believe t t an equally good stump may ultimately be formed by the one as by the other. The rapidity with which the flap operation can be done is an advantage over the other; but the circular method gives a firmer and neater stump.

Women and Crime.—On criminal charges more women are acquitted than men. Of the men who were proceeded against summarily in the year ending at Michaelmas, 1859, 68·7 per cent. were convicted by the magistrates; of the women only 53·9 per cent.—a difference of nearly fifteen per cent. Mr. Redgrave states that it is so throughout the criminal statistics, and therefore it must extend to the graver offences, but in compiling the "Judicial Statistics," he has distinguished males from females in the commitments for indictable offences, but not in the convictions. The cause he assigns for this good luck of women is leniency towards their sex; so that Justice is not so blind as she is painted

Editorial.

WHY SPECIAL HOSPITALS ARE FOUNDED.

WHY are Special Hospitals founded? We presume that the justification for special hospitals must be the same as that for general hospitals. The leading arguments for hospitals are these: First, the administration of medical and surgical relief to the necessitous poor; secondly, the sanitary and social necessity of removing persons afflicted with particular diseases from dangerous intercourse with the community; thirdly, the provision of schools of medicine. The second argument is that which applies most closely to special hospitals. In analyzing the grounds for establishing special hospitals, we have pointed out how far this argument really applied to many cases, and showed how it had been abused in others. Special hospitals derive little or no support from either of the two other general arguments. With the exception of hospitals for lunatics, which are altogether peculiar, and partake largely of the character of asylums and places of detention, there is hardly an example of a special institution which is called for as a social or sanitary necessity. Still less can it be contended that more than a very few special institutions justify their existence upon the ground of their utility or necessity as advancing medical knowledge. The circumstances associated with the insane, indeed, render it difficult or impossible to study mental diseases in their completeness unless observation be extended to lunatic asylums. But are we not familiar with the complaints of our leading psychiatric practitioners, who deplore the ignorance of this subject prevalent amongst the medical profession? And is not the explanation of this ignorance obvious enough? It is simply because the insane are treated in special hospitals. They are thus placed beyond the pale of general observation. The student who seeks to acquire a practical knowledge of insanity must detach himself from the centres of medical study: he must abstract, at great inconvenience, his attention from all other objects of professional investigation. The obstacles are sufficient to deter the great majority of medical students. And there is this further hindrance to the cultivation of psychological knowledge: the physicians who are charged with the care of the insane, and who, it might *primâ facie* be supposed, enjoy the fullest opportunity for carrying that branch of knowledge to the highest perfection, are themselves placed by this isolation in an unfavorable position. They are deprived of that inestimable advantage of a wide observation of man in health and disease, and of free intercourse with the medical world, to which the physician owes so much of his scientific power and practical sagacity. They want that most lively and efficient of all incentives to accurate observation and scientific labor which the duty of teaching supplies. It has often been to us matter for surprise that, under difficulties so great, so much deserved distinction should have been achieved. But if we look closely, we shall discover that the greater part of this special distinction has been acquired by men who have sedulously mingled the study of general medicine and the practice of teaching with particular devotion to their special duties.

Similar reflections apply with at least equal force to other special hospitals, the justification of which is not based on the same grounds of paramount social necessity. The debt due to the Ophthalmic, the Lock, and a few other Hospitals may be freely acknowledged. But it would be absurd to contend that the contributions to science derived from these institutions are to be ascribed solely to the opportunities afforded of observing particular diseases under the condition of concentration. Had the physicians and surgeons of these institutions worked on the principle of special or exclusive devotion to the diseases received in them, it may be safely affirmed that the scientific progress they would have made would have been insignificant. These special hospitals have been valuable because able men have known how to make them dependencies upon the general hospitals—the true fountain of all sound medical knowledge. Small, indeed, has been the educational or scientific value of any purely isolated special hospital.

If we find, then, that special hospitals, with rare exceptions, are not required for the purpose of extending relief to the sick—that they are not required as sanitary instruments—that they interpose real obstacles to the accurate and comprehensive study of disease—on what ground shall they be justified? These are the only really urgent grounds. They are urgent because they are of public interest. If we seek for another foundation, we stumble straightway upon grounds of private interest. The justification for special hospitals is strictly special.

Many years ago, in the days before THE LANCET had broken down the monopoly of the great hospitals, there existed a peculiar plea for the establishment of new institutions. Four or five hospitals formed the only arena upon which the aspirants for professional fame and wealth could contend. From these all talent was excluded that did not possess the merit of alliance by family ties or by purchase with the ruling magnates. Independent worth struggled and writhed in vain under the incubus of nepotism. Men conscious of their powers, earnest for labor, and impotent to force the doors of existing institutions, had no resource but to open new hospitals. In this they were justified on public not less than on private grounds. But this plea has now happily been destroyed. With the growth of population new general hospitals have arisen. The force of opinion, set in motion and driven home by this journal, has liberated the old hospitals. It is still true that in some the traditional spirit of exclusiveness prevails. There are hospitals that even now are unable to discern exogenous merit great enough to be suffered to compete with that themselves have reared. But these examples are diminishing. The stimulus of rivalry between the different schools; the essentially public life which the incumbents of our great hospitals lead; the necessity which now presses upon men as well as on institutions to justify their position,—all tend to give freer scope to the principle of competition. One has but to look around to see numerous examples of men who have thrown themselves unbefriended into the lists, and who have been cheerfully welcomed in the great schools. There is now no lack of opportunities to prove the possession of merit; and no reason for men who have given evidence of its possession to despair of obtaining a fitting field for its exercise. Of course there will always be a certain number of "*hommes incompris*," who will dissent from this statement. Such men failing to impress a due sense of their deserts upon the members of their profession—who are not only the most discerning, but, we believe, also the most candid judges—will, as heretofore, seek to persuade benevolent ladies and clergymen to provide them special hospitals, where they may display their slighted genius, and perform such cures as will shame the bigotted physicians and surgeons of the great institutions.

Let the profession declare whether this be not the special secret of the getting up of the special hospitals, which rise like fungi in the back-parlors of decayed streets in this metropolis.

In another page we publish a document which cannot fail to be perused with the greatest deference and interest by the public and the medical profession. The man who, by his long experience, by the vigor of his intellect, by the philosophical and judicial character of his mind, and, we may add, by universal consent, is best fitted to represent the interests of Medicine, as they concern not only those who practise the art, but those also for whose benefit it is practised, has declared his opinion, in emphatic language, against the establishment of Special Hospitals. The three arguments so tersely and clearly put by Sir Benjamin Brodie have been more than once touched upon or developed in this journal. But their importance is such, the injury that must necessarily result from neglecting them is so great, that we welcome with peculiar satisfaction the decision of one who can survey the question from the eminent position of the great surgeon who, himself far removed from all personal concern, speaks with the calm authoritative voice of reason. The very eminence of Sir Benjamin Brodie is in itself a rebuke to those who pretend that special hospitals can either make a sound professional reputation, or give that medical experience which deserves the confidence of the public. We are tempted to declare our impression that no surgeon or physician has ever, through his connexion with a special hospital alone, acquired a solid position in the estimation of the public. The utmost men have so acquired has been money. With this, no doubt, many hold themselves amply rewarded. For this, all that adds dignity to the practice of medicine, the welfare of man, and consideration amongst colleagues, have been willingly sacrificed. We may confidently say that the establishment of special hospitals has not only operated most injuriously upon the public status of medicine, but has degraded the officers of those institutions themselves. If it were a matter of experience that the men who have so devoted themselves, as they phrase it, to the exclusive study of a particular disease, have thus frequently made valuable additions to knowledge, then indeed might it be plausibly urged that special practice is justified. But little of the kind can be pleaded. If we seek for the reason, we find it in this reflection of Sir Benjamin Brodie:—

> "Diseases generally are so connected with each other, and a knowledge of one is so necessary to the right understanding of another, that no one who limits his attention to any given disease can be so competent to investigate its nature, and to improve the method of treating it, as those who have a wider field of observation, and who are better acquainted with general pathology."

There is not a well-educated medical practitioner who will not assert the truth of these admirable words. It seems to follow that a man who "devotes himself" to special practice and the elucidation of a particular disease, devotes very mean abilities to the task, and thus adds to the difficulty indicated by Sir Benjamin. He who is animated by a sincere ardor in pursuit of truth, and is gifted with adequate intellectual powers, is sure to discern the broad highway that will conduct him to comprehensive and accurate knowledge, and to shun the contracted path which he knows will only land him in prejudice and error.

There is another feature, not less odious than the rest, of this pursuit of special knowledge. Knowledge ought to be universal in her diffusiveness, as she is in beneficence. To endeavor to so restrict her as to make her the particular appanage of an individual, something to be traded with, and made the subject of personal profit, is a proceeding closely akin to the arts of those who advertise patent remedies, and appeal to the ignorant and credulous of mankind. It is well stated in the Protest to be found in another page of this issue, and by Sir Benjamin Brodie, that the establishment of special hospitals is calculated to draw off particular classes of disease from the general hospitals, and thus to deprive students of the full opportunity of becoming acquainted with certain branches of their profession, a knowledge of which is necessary to make them useful practitioners. It is a matter of familiar observation that the exigencies of study in our schools of medicine render it absolutely impossible for a student to run about from place to place in the hope of picking up a bit of medical knowledge here and a bit there. Sad indeed would be the prospect of the student who should be condemned to make a pilgrimage from one end of this vast metropolis to the other, where locomotion is so exhaustive of time, that the student, before he arrives at the allotted term of his studies, will retire from his pursuit of knowledge under difficulties with disgust. The obvious effect of this proposal to perfect the study of diseases by dividing them from each other in distinct buildings is to obstruct the progress of true knowledge, and to substitute the pretence of knowledge and a sham.

We believe that the cure for this monstrous evil —an evil that springs up within the profession—lies with the profession itself. That this has been felt by those to whom we must naturally turn for guidance is abundantly testified by the decided tone and the clear reasoning of the protest signed by such men as Brodie, Green, Mayo, South, Arnott, Clark, Holland, Locock, Latham, Watson, Gibson, Liddell, Martin, Babington, Hastings, James, Symonds, and others.

These are all representative men. They have given utterance to the true feelings of their profession. They have advocated the cause of science in the interest of mankind. It remains for the body of the profession—those who have sons to educate, those who honor their calling—to mark their sense of the conduct of those who, by establishing special hospitals, inflict such injury upon science.

THE THAMES AND THE PURIFICATION OF SEWERS.

Father Thames, aided by the natural elements, has this year so effectually accomplished the task of harmlessly converting the sewage we discharge into his bed, that there has been no need to call upon the regular practitioner, or the crowd of disinfectant-mongers to make up for his shortcomings. We are now far in August; and, wonderful to relate, the river has remained as fresh as in the depth of winter, or in the days of yore, before the epoch of Commissioners of Sewers. For a season, at least, the depopulation of London by river malaria is stayed.

The key to the whole mystery of the purifying capacity of the Thames at London is simply this: it is a battle between the down flowing freshet and the up-flowing ocean wave. If the tidal wave has the preponderating power, and beats back the fresh-water to a point above the town, then the sewage is likewise ponded up, it accumulates, mixes with the sea-water; under the influence of summer heat, reaction and decomposition ensue, and the product is the delectable odor with which for three preceding summers Londoners were regaled. If, on the other hand, the spring rainfalls are heavy, causing an abundant and continuous freshet, then the salt wave in its turn is resisted in its ascent; the sewage is received into fresh water, which rapidly disinfects it; the strong down-current sweeps all below London, and we are free from all annoyance. In either process, excessive temperature acts an important but still a subsidiary part. The temperature of the water must reach 60° in any case to give rise to active decomposition. But if the freshet is so strong as to carry the salt-water down as low as Blackwall, even a higher temperature will not produce any very sensible effects. For some weeks past the temperature of the water has exceeded 60°. The advance of the salt-wave is indicated by analysis of the water taken at high tide at a fixed point. Thus in June, 1858, the water so taken at London-bridge contained an average of 147 grains per gallon of solid constituents; in June, 1859, it contained 88·3 grains; and in June of the present year only 30·7 grains. This latter proportion indicates the presence in London even at high tide of water almost fresh. Under these circumstances the sewage is swept past us in fresh water, and undergoes in its transit an inoffensive conversion into oxides and living organisms, which take the place of the putrid decomposition attendant upon the reaction of sewage and sea-water. Such is the lesson taught by the continuous observation of the waters of the Thames, conducted on the plan proposed by Dr. Barnes in 1857, and carried out by him and Dr. Odling during that year, and by Dr. Odling, Dr. Letheby, and Professor Miller in 1858, 1859, and 1860. All subsequent observation confirms the conclusions put forward in 1857.

Now comes the question. What are we to do when the Thames is itself unequal to the task of disposing of our excreta without returning it in the form of putrid gases? The plans tried have been but partially successful. We postpone all reference to what some look forward to as the radical cure—the interception of the sewage from the metropolitan part of the river. We will refer more especially to the plans for disinfecting the sewage previous to discharging it into the stream. Last summer was a trying season. Stations were established near the outlets of the main sewers for treating the sewage first with lime, and afterwards with chloride of lime. We believe the opinions of competent observers differ as to the efficacy of this treatment. But the following facts remain:—The temperature of the air and the water was mostly higher, and the rise of the salt wave also higher in 1859 than in 1858; and yet the offensiveness of the Thames was not so marked or persistent. To a certain extent it may, therefore, be inferred that putrefaction was arrested. But even those who were best satisfied with the lime and chloride of lime were anxious to discover a more efficient remedy. Our readers are familiar with the discussions on the merits of the various preparations of chloride of iron; they know that it was intended by the Metropolitan Board of Works, under the advice of Professors Hofmann, Miller, and Frankland, to employ this year Dale's, or some other, perchloride of iron; and they are aware how, owing to the criticisms of Dr. Odling and Dr. Letheby, and more especially the remarkable discovery by the latter chemist that Dale's fluid contained an enormous quantity of arsenic—viz., nearly three hundred grains of chloride of arsenic per gallon,—all idea of employing a material that may be dangerous, as well as inefficient, has been practically abandoned. As we have said at the beginning, the Thames, by behaving so admirably this year, has given abundant time for the investigation of new expedients. The most promising appears to be M'Dougall's fluid, which consists of carbolic acid, or the creasote of coal-tar. The evidence in favor of this agent as a disinfectant, or rather as a preservative against decomposition, is very striking. At Croydon, the scene of many famous hygienic experiments, where the perchloride of iron and other means had failed, the carbolic acid is now in use, we are informed, with full success. All annoyance there from decomposing sewage has ceased.

At Carlisle, 600,000 gallons of sewage—the entire excretion of the town, during the fourteen hours per day of working—is treated with this substance. The mixture is there used for irrigating about eighty acres of meadow land with a very interesting result. We are informed that the product of the sewage-irrigated meadows near Edinburgh must be consumed as grass, and cannot be gathered and preserved as hay, owing, no doubt, to imperfect assimilation of the putrescible sewage. At Carlisle, however, excellent grass and hay are produced, which sell at a good price; whilst complete freedom from sewage-nuisance is enjoyed.

Another piece of evidence is interesting. In Paddington, under the sanction of Dr Sanderson, the medical officer of health, the carbolic acid is used for watering the roads. The detritus of manure, which in warm weather imparts so disagreeable an odor to the atmosphere, is said to be entirely obviated, so that the inhabitants highly appreciate the system.

Again, during the month of July this agent has been subjected to careful experiment upon a sewer in the City, under the superintendence of Dr. Letheby. The carbolic acid was poured into the head of a system of sewers taking the excreta of about 21,000 inhabitants. The proportion used was one gallon of carbolic acid to 32,000 gallons of sewage; and the result was so perfect that sewage taken near the river outlet was found to be entirely free from putrefaction. Looking at this result, we cannot but hope that the sewer nuisance is at length brought under control; and that we possess in this material a cheap, easy, and effectual remedy against the continuous evolution of poisonous and offensive gases from gulleys and house-drains. This primary evil, if not more dangerous to health, is certainly more widely diffused, than the secondary emanations from the Thames. It ought to be encountered energetically on the plan we have several times enforced—namely, by the simultaneous establishment of disinfecting stations in many different points of the periphery of our great sewage system. Were this thoroughly carried out, we should have none but deodorous sewage flowing past our houses and under our feet, and no decomposing matter discharged into the river. Thus would two most desirable ends be attained by the same operation. It deserves to be further remembered that the sewage thus preserved from change would be ready in the most convenient form for utilization as manure, in the event of any efficient plan being proposed for applying it to the irrigation of our impoverished fields.

ASSISTANT MEDICAL OFFICERS OF HOSPITALS.

For several years past the injustice to which the assistant medical officers of our hospitals have been subjected has been the theme of many of the leading articles in this journal. What is the position of these most useful members of our profession? Selected from the most energetic and well informed of the rising men of the profession. they are called upon to devote their time and skill to a vast number of patients who require their assistance. But though the hardest worked, they receive no emolument, and, under the present system, may be worn out in the service before they take that position to which their exemplary labors entitle them. It is impossible to conceive an arrangement more disastrous to the reputation of an institution, or more detrimental to the welfare of the suffering poor. Of course the advocates of a vicious system will always be prepared with what are called arguments in defence of the abuse; but, tested by truth and justice, these arguments are flimsy and contemptible. They are even subject to a worse objection—they are the offspring of selfishness and exclusiveness. Again and again have we demonstrated this fact; but hitherto the governing powers of our hospitals have been persistently blind to the truth. But the truth must be told. Hospitals were not founded for the pecuniary advantage of the privileged few, but for the greatest good of the greatest number. If a man labors in the cause of charity honestly and faithfully, he is entitled to all the benefits which may accrue to him from his labors. No one capable of forming an opinion on the subject will deny the force of this assertion. Why, then, exclude the assistant medical officers from participation in the honors and emoluments which pertain to their seniors? Anticipating the answer which may be given, that they must work to obtain a position, we affirm that if they are worthy of treating the out-patients of an hospital they are worthy of being remunerated for their labor. We sincerely trust that the agitation at present existing with respect to the management of the metropolitan hospitals will terminate in such a manner that justice may be done to all their medical officers.

POSITION OF ASSISTANT MEDICAL OFFICERS.

From the numerous communications received respecting the position of the assistant medical officers at our hospitals, it is evident that this subject is attracting the serious attention of those more immediately interested. The system pursued in most of the metropolitan hospitals is calculated not only to foster ill-feeling, but to subvert the best interests of our more important charitable institutions. No scheme could be devised more likely to injure the value and reputation of an hospital than to place its assistant medical officers in an *inferior position.* These gentlemen are not only the real workers, but are occasionally those upon whom the fame of the institution mainly depends. For every single case treated in the wards, there are, on a fair average, twenty prescribed for in the out patients' rooms; yet the gentlemen who pass many hours of the day in fulfilling the onerous duties which pertain to the treatment of out-patients receive, with one or two exceptions, no emolument, and in no instance obtain any position as medical officers of the institution. No regulation could be conceived of as more absurd or more unjust. Instances have occurred in which most deserving and able men have devoted the best years of their lives to these unrequited and almost unacknowledged labors. One case in particular we may mention: A surgeon of ability, one of the greatest and most successful operators, the author of a valuable work on operative surgery, spent thirty years of his life as an assistant in the largest endowed hospital of this metropolis. His promotion to the position of surgeon came too late for the advantages it might confer upon him, though not too late for the celebrity he had justly earned. He had been a successful teacher, universally beloved by the students, and had raised the reputation of the institution to which he was a mere appendage. This is an instance, though not a solitary one, of the injustice to which men in his position are subjected. Is this condition of things to continue? Certainly not, if the governors of our hospitals are alive to their duties. The remedy is simple, and calls loudly for adoption. Let such regulations be made as will mete out, fairly and justly, reward and position to those who exert themselves honestly and faithfully in the discharge of their duties to the institution and to the public. If a man is worthy of being placed in a most responsible office, let him have some stimulus for the continuance of his labors; let him be fortified with the conviction that his services are not unrequited, and that he may look forward with confidence to the time when he shall be the reaper as well as the sower. In the cause of a large class of our professional brethren and the public we demand that this act of common justice be done; that the faithful servant shall not grow grey and pass the meridian of active life with the sole consciousness that he has done his duty, and be left in old age with the conviction that he has spent his life for the benefit of others, to the sacrifice of himself.

THE SEPARATE TREATMENT OF LUNATICS.

There is a question concerning the care of insane persons in which the public and many members of our profession are much interested. Ought it to be laid down as an axiom, that lunatics should, without exception, be treated in masses? Or, to put the question in another form, are there not cases which might be treated with greater advantage by being entrusted singly to the care of a medical practitioner? Must it be carried out as an inflexible and universal rule, that no person afflicted with mental disease is to be suffered to live out of a public or private asylum? The presumption in this, even more than in most other instances of absolutism, is against the propriety and expediency of enforcing one unvarying system of treatment for patients who manifest such endless varieties and degrees of malady. Yet the tendency of the present administration of the Lunacy Laws, as we interpret the proceedings of the Commissioners, appears to be strongly in favor of packing all the insane together in crowds. No doubt there is great administrative convenience in this arrangement. It may be urged that it is more economical, although with our experience of Middlesex county asylums this may admit of dispute. When we know that all the lunatics in the kingdom are aggregated in certain licensed buildings, nothing is more easy than to subject every individual patient to periodical visitation and systematic treatment. Everyone is thus accounted for. All the circumstances connected with his case: his history, his property, his progress, can be satisfactorily recorded under tabulated heads Nothing is so admirably adapted for dealing with each individual patient statistically. You untie a fillet of red-tape, and unroll a tabular map, and you find in its allotted place, under certain definite headings, certain entries which are conventionally or arbitrarily assumed to give a correct description of each one of the crazed items who make up the aggregate sums of our national lunatics. A certain amount of seemingly precise, and really more or less important, information can thus be readily given concerning any particular patient. Thus we shall be glibly told that A. B. belongs to the class, monomaniacs; that he has been put under restraint twice during the last twelve month; that he has been in three different asylums; that he belongs to the Established Church; that he has £300 a year; that the asylum proprietor receives £150 a year for his maintenance, and so on. But we are not told whether the herding with a community of other lunatics has exerted a curative or a depressing influence upon his mind. Of course he has been duly classified and labelled; he has not been put into the same ward at night with the *gâteux*, or made to consort in the daytime with raving maniacs; he has been allowed to associate with other delusionists, and to try how far the interchange and collision of conflicting delusions may exert a neutralizing or curative influence upon his own. But little heed is taken of his experience in the matter. He is not asked what he thinks of his condition. We are not told of those fearful hope-abandoned first hours of seclusion in a madhouse; of those nights sleepless with racking thoughts, and those days of forced companionship with lunatics, incessantly reminding him that he is shut out like a Pariah from the healthy world, to which if he returns, he goes with an indelible brand upon him. With all our asserted and real consideration for the insane, we are too apt to take the whole task of judging and acting for them upon ourselves. Of course all is done for the best, and it would be absurd to attend over much to a madman's whims. His judgment is obviously unsound upon some points: he is, therefore, incompetent to form any opinion, or to utter a wish deserving attention concerning his personal treatment. Our intentions are sternly benevolent, our reasoning inexorable, and our authority without appeal; so to the asylum the lunatic must go.

So reason and so act our Commissioners in Lunacy. It seems to be a settled policy with them to discourage to the utmost the separate treatment of private lunatic patients. They look with habitual suspicion upon the conduct and motives of those who have charge of single patients ; so much so, that the charge has, in many instances, practically become even more harassing and anxious, from the interference of the Commissioners, than from the ordinarily heavy responsibility attending the care of the lunatic. The probable result of this is, that exactly those persons —especially medical men—who are the best qualified by education, position, and responsibility, for such a charge, will soon relinquish, with disgust, a duty which exposes them to continual degrading imputations and annoyance. It is clear, that in this manner none but persons possessed of little self-respect, and giving little security in social standing, will undertake the vexatious task. When things have arrived at this pass, the Commissioners will probably have little difficulty in effecting—what we must suppose to be their design—the abolition of the single treatment of lunatics. All the objections that experience has verified, or that distrust has suggested, will then be the normal condition ; and public opinion will sweep away the last relics of a system, in the continuance of which no respectable man will have an interest, and which will only be known for its sordid abuses. We do not say that the Commissioners deliberately contemplate such a policy as this. But the perusal of their Reports, and the complaints which reach us from medical practitioners of the highest respectability, can leave no doubt that the course adopted is unerringly aimed at rendering the charge of single patients by any gentleman of character an utterly intolerable pursuit.

Differing widely from the Commissioners upon this point, seeing many evils, and often much needless aggravation of the distress of insane patients, from the system of crowding them together, and believing that there are many cases in which humanity and science concur in indicating the superiority of separate treatment,—the "Free air system,"—we should regard the consummation now being forced on by the Commissioners as a most serious evil. Of course we are willing to admit that there is good foundation for the conviction of the Commissioners, that the system of treating the insane as single patients, demands the most careful supervision, both legislative and otherwise. But this supervision need not, especially in the case of gentlemen who give to the world the double guarantee of professional and social standing, be made harassing, offensive, and arbitrary in its operation. Nor should it be forgotten that asylums, public and private, also require strict supervision, and that gross abuses may, as in the recent deplorable case at Colney Hatch, take place in them notwithstanding. There is one feature in the case of single patients which deserves to be honorably mentioned. As a rule, patients are thus placed under the responsible and particular care of a medical practitioner from the kindest and most considerate motives on the part of the relatives. Frequently a far higher allowance is paid than would be required for maintenance in an asylum. This desire to place an insane relative under the care of a medical practitioner is certainly dictated far more by regard for the feelings and interests of the patient than by any mere family considerations. Often the medical man is a family friend ; the utmost confidence is reposed in him ; an assurance is felt, that with him the afflicted person will receive the most thoughtful and anxious attention. This confidence the friends cannot always transfer to strangers, even though they be proprietors of licensed asylums, under the supervision of the Commissioners. We repeat our admission, that the Commissioners may well have witnessed cases, which, to some extent, justify their distrust of the system. But we must protest, that it is neither rational nor just to apply the jealous vigilance and interference, which particular cases of apparent abuse have excited indiscriminately to all, in such a manner as cannot fail to cause every man of honorable feelings to emancipate himself from their control, and to abandon the care of single patients to a class of persons whose conduct would soon leave no question as to the necessity for abolishing the system.

MEDICAL OFFICERS OF THE INDIAN ARMY.

THE following remarks of Sir James Outram, extracted from a lately published minute concerning the Indian Army, are worthy the reputation of that distinguished soldier. Few men have had better opportunities for judging of the merits and position of the Medical Officers of the Indian Army than Sir James Outram :—

> "There is one class of officers in respect of whom I would fain make a special appeal on this score, as they are a class which, to our disgrace be it said, has been treated with singular harshness and illiberality by their military and civil superiors. I allude to the Officers of the Medical Department—a body of men who not only are unsurpassed by any other body in the service by professional zeal and skill, gallantry and devotion to their duties, but have especially distinguished themselves by the success with which they have cultivated general science, and the earnestness with which they have applied themselves to the promotion of education and other philanthropic objects. These men, especially those of the Bombay establishment, have been treated by us with such unfairness that a Physician-General of that Presidency—a man whose name is held in honor both in and out of his profession—I allude to Dr. M'Lennan —felt himself authorized to assure the late Lord Frederick Fitzclarence that had any officer treated his dog-boy in the manner in which the Court of Directors and Board of Control have treated the medical service, he would have been brought to a Court Martial and cashiered for a dishonorable breach of faith. The Physician-General's illustration was a strong one ; but, after explanation, its justice was admitted by that Commander in-Chief who henceforth felt warmly on the subject.
>
> "In behalf of this noble and *ill-used* service Lord Dalhousie made a generous interposition ; and though his lordship's efforts were at the time unsuccessful, his appeal was so forcible, and his general views have been so ably and earnestly supported by Lord Canning, that *justice* cannot long be denied them."

If this be a correct account of the grievances to which the Indian surgeons are subjected,—and no one can doubt its accuracy,—there is little inducement indeed for gentlemen to enter the service. The continuance of such an abuse is unjust and impolitic—unjust, as it inflicts injury on a meritorious class of officers; impolitic, because it deters the best men from entering the service of those who profess so much, but, in reality, perform so little; who

"Speak the word of promise to the ear,
But break it to the hope."

THE GRADES OF THE PROFESSION AND THE "ONE-FACULTY SYSTEM."

WHATEVER difference of opinion may exist as to the benefits of the "one faculty system," there can be none as to the injurious influence which is at present exerted on the profession by the jealousy and rivalry now prevailing in the various Universities and Colleges throughout the kingdom. The result of these disagreements is to "make confusion worse confounded." They create jealousies and difficulties where none should exist. Under judicious management, the "one faculty system" would annihilate these disadvantages. Who at the present moment can define the position of what are ridiculously called the grades of the profession? We have "doctors of medicine" who are not "physicians;" we have "physicians" who are not "doctors of medicine;" we have doctors of medicine practising the profession generally, and we have surgeons who append the title of "Dr." to their names. We have no desire to find fault with any gentleman who may wish to improve his status by the assumption of any title which he legitimately possesses. The "general practitioner" is the medical attendant of the million. He is the physician in ordinary to the family, and he is not only justified, but praiseworthy in his efforts to show his right to be so regarded. There must always in a profession like that of Medicine be consulting practitioners. The public require them; but the time is long past when the mere possession of a diploma or a connexion with an hospital can entitle any gentleman to assume a superior position. Equality can never exist where competition is so general. We only ask that a common portal should be open to all who enter on the responsible duty of attendance upon the sick. The superior mind will always have an opportunity of showing its claims to distinction. The profession and the public are never slow to give honor where honor is due. THE LANCET has never faltered in its exertions to institute a system calculated to confer the greatest advantages upon the profession. The time is critical, and justice will eventually be accorded to the many, notwithstanding the intrigues and selfishness of the few, who still presume to be the legislators and directors of medical education. Recent events point unequivocally to a most desirable result. The corporations have failed in their duty; they have neglected to seize the opportunities which have been presented to them; they have played a desperate game with "loaded dice." The trick has been discovered; the players have been confounded. Their quarrels have opened the eyes of those who have been too long duped, and with fair play no one can doubt the result of the contest.

Medical Annotations.

THE ETHICS OF VIVISECTION.

ANIMATED by a desire to extend the conquests of peace, and to emulate the generous enterprises of intellectual confraternity by which the Anglo-French alliance has lately been illustrated, the English Society for the Prevention of Cruelty to Animals has, in the course of the summer, made a campaign in Paris, and their commissioners have marched side by side with the Société Protectrice des Animaux, to do battle with the *vivisecteurs* of Alfort and of the experimental school of Paris. The vivisections of the veterinary schools of France have been conducted on a scale involving painful expenditure of life and a vast amount of prolonged suffering to the animals concerned. It was necessary, then, to determine whether these experimental operations upon living animals were cruel in any actual sense of the word; that is, whether they included any unnecessary gratuitously-inflicted pain, or whether they were purely limited to experimental investigations likely to be useful to mankind. On this point, a printed report of the Société Protectrice has been received by the English Society, which very fairly summarizes the views that surgeons and physiologists hold on such matters. The highest acquisitions of medical science during the last century, notably all those which concern the functions of the nervous system and the acts of digestion, have been due to progress in physiological knowledge. That progress has been mainly owing to the intelligent study of the living parts of the animal system submitted to experiment by vivisection. Clearly, then, vivisections *per se* cannot be ranked amongst acts of cruelty, since they aim successfully at objects of scientific utility; but must be regarded as a means of scientific research worthy of the appreciation of all who are sincerely interested in the progress of science, which means the real welfare of humanity. On the other hand, when at any moment the practice overpasses the rigorous bounds of utility—when its object is no longer the pursuit of new solutions to scientific problems, or the examination of hypotheses requiring a test—when vivisection is elevated into an art, and this art becomes a matter of public demonstration, then it is degraded by the absence of a benevolent end, and becomes a cruelty. Thus the exhibitions at Alfort, and in other amphitheatres, of experiments which aim only at a repetition of inquiries already satisfactorily concluded, and the demonstration of functions already understood, appear to us, as to this commission, to rank amongst the excesses which must be deplored if not repressed. The displays in these amphitheatres are of the most painful kind, and it is to be most deeply regretted that curiosity should silence feeling and draw spectators to mortal suffering. Even in these vivisections which are devoted to the laudable objects of original investigation, those means of narcotism are but little employed on the Continent with which our English experimenters so often, so cheaply, and so successfully remove the subjects of their experiments from the sphere of sensation. We believe that the representations of this commission, backed by the strong appeals of common humanity, are likely to be attended by a modification in the continental custom of vivisection. The commission asks for nothing which the most zealous devotees of science cannot and ought not to grant. It demands only the cessation of experiments which are purely repetitive demonstrations of known facts.

VITAL STATISTICS OF AUSTRALIA.

The delegates who lately represented the Australian colonies at the International Statistical Congress have furnished us with important reports upon the vital and material progress of the colony. They express a conviction that the improvements which are being effected in the larger towns must sensibly diminish the high ratio of urban mortality heretofore observed. Sydney and Melbourne are both now well supplied with good water, and in the former city an extensive system of underground drainage is far advanced towards completion. Infant mortality has long been excessive in Melbourne. In South Australia for 1858 the death-rate of children under ten years of age amounted to 69·28 per cent. of the total of registered deaths. An established feature seems to be the greater mortality in the warm as compared with the cold season of the year. The latest statistics from Melbourne illustrate this point by a comparison of three quarters ending 31st March of this year, which appears thus: Quarter ending 30th September, 1859; mean temperature 50°·4, deaths 663; ending 31st December: 92°·5, deaths 976; ending 31st March, 1860: 66°·6, deaths 1066. Hospitals are now established in all the colonies, and in Victoria they are numerous, also in the towns of the gold fields. In the absence of a Poor-law, benevolent asylums for the infirm and destitute have also become general. The lunatic asylums show prominent statistics in the two older colonies. The large number of insane persons in New South Wales and Tasmania is attributed to the presence of the last elements of the convict system. In the former it is 1 in 518; in the latter the still higher rate of 1 in 482; while in England it is about 1 in 700. The habits of criminal life have sent many either to premature graves or to the asylum. The proportion for Victoria for 1858 is only 1 in 1000, which contradicts the opinion often expressed that the excitements of gold mining life, and the great consumption of ardent spirits in a climate unfavorable to such indulgence, had produced an unusual amount of insanity. The return for 1857 was still smaller than that for 1858, but the cause is explained by reference to improved arrangements for transmitting lunatics from the country prisons to the Asylum near Melbourne, and possibly to some slight extent the results of 1858 may be similarly affected. The South Australian Asylum presents only 39 subjects for 1857, and 40 for 1858, with a population of from 110,000 to 118,000 for these years.

LANCING AN AORTIC ANEURISM.

A painful case in which life was abridged by the frightful error of a person named William Kendall, was tried at Carlisle, on the 1st instant, before Mr. Baron Martin. It appears that the prisoner had been in the habit of attending people afflicted with swellings, cancers, and tumours, and had a large clientage amongst the farmers of the country side. The fault committed was so gross and apparent, and the death followed so immediately as the direct consequence, that the case was in all respects free from complication, and of its class typical. It seems important therefore, to append a full report:—

"The deceased, Joseph Gregg, had been for some months afflicted with an aneurism of the aorta, or large artery adjoining the heart. The aneurismal sac had by pressure caused the aborption of a large portion of the sternum, or breast bone, and of the ends of the third, fourth, and fifth ribs, and having forced its way through, appeared like a large tumour or abscess, discolored and whitish under the skin. The deceased had been to the Liverpool Infirmary, and had been attended by thirteen doctors, who told him they could not do anything to the tumour, and could do nothing for him. He was in intolerable pain, and sought out the prisoner, who told him he thought the abscess was not ripe, and he would see him in a week. The prisoner saw him, and the deceased begged of him to lance the tumour, as he could not bear the pain. The prisoner accordingly applied his lance to the surface of the tumour and a quantity of yellow fibrine escaped, followed by clotted blood, and eventually by arterial blood. The prisoner tried to stanch the bleeding by sewing up the wound, and by applying flour and cobwebs to it. The deceased lingered from the 25th of February to the 3rd of March, when he died from exhaustion. On the part of the prosecution it was contended that to lance an aneurism betrayed such gross and culpable ignorance and rashness that, the man having died in consequence, the prisoner was guilty of manslaughter.

On the part of the prisoner, it was contended that he was a person not devoid of skill; that he had acted in good faith, and had exercised his best skill at the earnest request of the deceased, and that the fact of his not being a medical practitioner made no difference in point of law. It was elicited in the cross-examination of the medical witnesses that, except from the pulsation of such an aneurism, it would be very difficult to distinguish it from an abscess or a carbuncle, and that, covered as it was by fibrine and coagulated blood, the pulsation would be very weak; and on this evidence it was contended by the learned counsel for the defennce that the prisoner, bringing fair skill and acting only at the urgent request of the deceased, was not guilty of either gross ignorance or culpable rashness; and, although he had made a mistake in the treatment of the deceased, acting to the best of his skill and ability, he was not on that account to be convicted of manslaughter.

His Lordship, in summing up, referred to the dictum of Lord Ellenborough in Williamson's case—'that to substantiate the charge of manslaughter the prisoner must have been guilty of criminal misconduct arising either from the grossest ignorance or the most criminal inattention. One or the other of them was necessary to make him guilty of that criminal negligence and misconduct which are essential to make out a case of manslaughter.' His lordship left it to the jury to say whether the evidence led them to either conclusion.

The jury almost immediately found a verdict of 'Not Guilty.'"

If the prisoner is not amenable to the charge of "grossest ignorance," or "most criminal inattention," then must the Legislature, which tolerates this reckless tampering with life by unskilled persons, plead guilty.

DEATH OF A LUNATIC UNDER CHLOROFORM.

A DEATH from chloroform has just occurred at the West Derby Workhouse, under circumstances which have given rise to much excited feeling and strong comment. At an inquest held by P. F. Curry, Esq., coroner, it appeared that the deceased was a female lunatic pauper, subject to fits of violent mania. Dr. J. B. Nevins, the medical officer of the Workhouse Infirmary, deposed that he had given directions that if she became violently excited, his pupil, Mr. Lupton, or Mr. Gough, the governor, should administer chloroform, and then send for him. Chloroform had on several occasions been administered to her. After the first dose she was much better, and he considered the case a proper one for the use of the anæsthetic. Dr. Nevins also said that he was expecting her death every day, independent of the chloroform, but that, no doubt, her death was "hastened an hour or two by the chloroform." It was administered by Mr. Gough, the governor of the workhouse, who had assisted Dr. Nevins at every operation for the last seven years, and who was considered by the latter to be quite competent for the administration in this case. However this may be, there can hardly be any diversity of opinion as to the impropriety of permitting the uncontrolled administration of so potent a narcotic by an unprofessional person. During the inhalation accurate note must be taken of the progressive changes in the respiration, the pulse, the temperature, muscular rigidity, and other vital phenomena. It were idle to rely upon an unskilful person in such matters, and we do not think that long habit is by any means synonymous with skilled experience in such a case. In this instance the circumstances were rendered yet more invidious by the fact that the vapor was applied to a patient described as being in the last stage of exhaustion, and given without due measurement, or the use of any means by which the proportion of the chloroform in the inhaled air could be definitely fixed. The operator "rolled up a piece of lint, placed it in his hand, and poured some chloroform upon it." This adds another death to the terribly long list of those who have died under chloroform, administered on lint without the intervention of Snow's apparatus or any other means for regulating the quantity and proportion inhaled—a careless mode of administration, such as is not tolerated with any other narcotic substance used for therapeutic purposes.

The most remarkable feature in the case, however, is the fact that in this large institution, with all its valetudinarian inmates, its sick wards, and its lunatic ward, there is no resident medical officer. It was owing to this shameful neglect on the part of the guardians that the governor was called upon to act in a medical emergency, and did his best to fulfill his duty according to instructions received. It would appear almost incredible that the sick patients of this workhouse should be left thus destitute of all medical superintendence; but it was given in evidence that at the time of deceased's illness there was not a medical man within a mile. The counsel on either side concurred in expressing the hope that this investigation might "have the happy effect of infusing more decency into the government of the wretched house at West Derby." And Mr. Snowball, for the defence, said he did not intend to palliate the conduct of the West Derby guardians, for it was impossible to defend it. Really the Poor-law Board, who are so active in badgering medical officers, might exercise a little useful activity in investigating the reasons of the guardians for leaving the sick of the West Derby Workhouse thus destitute of proper medical aid.

THE DESPOTISM OF DRESS IN INDIA.

It is now some five-and-thirty years since Dr. James Johnson, in his "Tropical Hygiene," gave this important advice to the Administration in India; he recommended that military full dress or uniform—the European badge of distinction—should be dispensed with at all festivals, public and private, formal, social, or domestic, within the Torrid Zone. He asserted that though the constantly going about in harness, like a cab-horse, might have a very military look, it was a highly uncomfortable practice and most injurious to health. Many a man he rightly affirmed, was sent to his long home eventually by the two great nuisances of service in the East—namely, over-parade and brigade drills, and faulty dress. There were commanding officers in those days who kept everyone, from the major down to the drummer-boy, in a continual fret and worry by exaggerated requirements in these respects. We may tell a good story, not known to all our readers, perhaps, in illustration of this. A musical society was formed in Calcutta by a number of gentlemen of the different services and a few professionals, and which rejoiced in the designation of the Amphion Club. Amongst the members was the general officer commanding at Fort William. The weather in Calcutta being pretty warm, the members attended the first meeting of the society dressed in the light habiliments which render the heat there just endurable. The delicate sense of military propriety was shocked at this. The major-general, though he *liked* music, *loved* regimentals; and he ordered that all members of the society should come for the future dressed in full uniform. A most military idea, truly; but it was, unfortunately for the welfare of the society impracticable. Stout gentlemen, sworded, sashed, coated, and booted, found that thus to play *obligatos* upon the violin, to blow clarionets, to wrestle with the double-bass, &c., was worse than "prickly heat"—it was to threaten with apoplexy. The practice, if not the idea, was dreadful, so the Amphion Club was dissolved; and thus, by a despotism of military etiquette in dress, a promised pleasant association was put an end to. Since the time of the Amphionists, however, many changes have taken place; and amongst those for the better has been the greater freedom allowed in escaping from "harness." But there is some fear, it would seem, of a relapse in India; for no sooner was Sir William Mansfield (who has always, according to the *Bombay Gazette*, passed for a bit of a martinet) appointed Commander-in-Chief of the Bombay Army, then he began to reform the regulations regarding dress. The following circular has lately been issued from heard-quarters :—

"Adjutant-General's Office, Head Quarters, Poona,
9th June, 1860.

"SIR.—The Commander-in-Chief desires that the officers of all branches of the Bombay army, may be discouraged as much as possible from the use of 'plain' clothes. They are to follow her Majesty's Regulations in this matter, and, according to the Orders applicable to the season, are to appear dressed in uniform in all places of public resort.

"2. In short, whenever an officer leaves his own lines after ten A.M. he is to be dressed in uniform.

"3. This Rule is not to interfere with the dress of officers when they may be engaged in sport, or during their morning rides when off duty.

"4. Officers commanding regiments must be well aware what a great additional expense it is to the young subaltern to keep up two wardrobes—viz., one of 'uniform' and another of 'plain' clothes. Many young officers are led into extravagance and debt upon this account, because they cannot resist the example set by their richer comrades; that which is a convenient fashion in England is really productive of nothing but a foolish and unnecessary expense in India.

"5. It will be understood that officers dining out, whether at the presidency or at military stations, are to appear in their regimental or staff uniform—either in 'full' or 'undress,' as occasion may demand

"6. This Order does not apply to officers in civil employment under the Government.—I have, &c.,
(Signed) "T. STOCK, Major,
"Officiating Adjutant-General.
"To the Brigadier Commanding—Brigade."

We know that there are many in the Presidency who do not think that Sir Wm. Mansfield will get much credit for his Order. It is difficult to change established customs, and especially when the majority think they are good. It has been urged that the argument about increased expense is absurd. Officers, it is clear, must have a civilian dress, and if they be forced to wear it less, and their uniform more, the *saving* will be inappreciable. But setting this aside altogether, the health and comfort of officers in India are surely quite as urgent as mere professional and military appearance. Now any person can imagine what is likely to be the result of compelling every officer to do office work all day in his thick cloth uniform! It has been hinted by those whose experience is not trifling, that if Sir William Mansfield will make the tour of the military offices in Bombay he will discover that shirt sleeves are commoner than shell jackets, and this, not from slovenliness, but on account of the climate.

CASE OF ANTIMONIAL POISONING.

AN important toxicological inquiry has been conducted this week at Yeovil, in which the medico-legal relations of antimony were narrowly examined. The epidemic character of crime has often been a subject of comment, and the frequent occurrence of cases of suspected antimonial poisoning at this time cannot escape attention. The Liverpool inquiry is actively progressing at this moment; several recent attempts have been chronicled; and during the last week it would seem that the chief toxicologists of the kingdom have been employed in searching for antimony in the bowels of the dead. In the Yeovil case, the suspicions have not been conclusively confirmed, but enough was shown to vindicate the sagacity of the physician in attendance, Dr. E. C. Garland, who had the discretion to discern symptoms of irritant poisoning through an obscure *entourage* of conditions due to natural disease, and the courage to act on his belief. The patient was a Mrs. Peters, a young woman of twenty-eight, the wife of a draper at Yeovil. Dr. Garland was called to attend her towards the end of last year; she was then suffering from irritation of the bowels and stomach. She improved, and for a time left his vicinity. On the 10th of June, Dr. Garland was again called in to treat the same distressing symptoms. The disease appeared to yield to the remedies applied one day, and to return with violence the next. This inspired Dr. Garland with suspicion, and on the 26th he obtained some of the evacuations, and found traces of antimony. He then forwarded some of the urine to Mr. Herapath of Bristol; and that gentleman also found antimony in the urine, and prepared a specimen of the red sulphuret for exhibition. Dr. Garland then privately communicated the facts to the superintendent of police; but on the following day Mrs. Peters was seized with acute pains in the abdomen, and on the 5th of July she died.

The family objected to a post-mortem examination, although informed of the antecedent discovery of an irritant poison; and an inquest was ordered, followed by adjournment for post-mortem and chemical analysis. Dr. Garland's stated opinion as to the cause of death arising from perforation of the intestine was borne out by the ulceration of the stomach and the presence of purulent matter and food in the cavity of the abdomen. Mr. Herapath testified that the liver was "in an extraordinary state, being pulpy and granular, and crepitating when cut through with scissors." The stomach was described by Mr. Herapath as being the subject of "a patchy inflammation such as is found to occur after the action of an irritant poison, and that parts of the intestines were in the same state." The antimony contained by the urine would account for the inflammation. No antimony, however, was found on analysis of the intestines and stomach. On that point Mr. Herapath, said: "There seems to have been antimony passing away from the body; and supposing the urine and viscera to have come from the same body, if sufficient time had passed for the whole to escape, of course there would not be any found. All that I can assume is, that antimony was passing away; and, from the appearances, I believe an irritant had been at work on the intestinal canal. It has not been discovered how long antimony will remain in the system. Antimony has not been long used as a poison, and it is not known what time it takes to disappear."

The complete examination of the body, however, showed long-standing and extensive disease of the liver, with considerable disease of the mesenteric glands, and some tubercular deposit in the lungs.

At the end of a very long inquiry, which was somewhat complicated by attempts to establish tubercle in the first stage as the cause of death, and the enunciation of some ingenious pathological surmises as to the possible origin of the intestinal inflammation and perforation of the stomach, the jury returned a verdict to the effect that "Sarah Peters died from a complication of diseases, accelerated by the presence of some irritant, but how or by whom administered there is no evidence before the jury to show."

The case is one of painful interest; and whatever may be doubtful in it, one thing at least is certain: the sagacity and the courage of the physician who so quickly discerned the symptoms of poisoning through all the clouds of accompanying disease, and so boldly performed his public duty by endeavoring to detect and prevent the crime. Skill so exercised and judgment so guided elevate medical practitioners to the highest rank amongst the guardians of public safety and the enemies of crime.

DEATH FROM CEREBRAL EFFUSION.

Amongst the nicest questions which the medical witness can be called upon to decide are the issues of death following injury, when, upon the performance of a post mortem examination, a cause of death is discovered, which may be attributed to the injury, but what might have also a spontaneous origin. We learn from a local paper that a charge of manslaughter against John Norris, at Uttoxeter, for causing the death of his wife by violently beating her about the head has "caused the greatest excitement which any case of the kind ever did;" and the evidence of the medical witness in this case is apostrophized with notes of admiration and expressions of surprise. Mr. Elkington, the surgeon who performed the autopsy, found the principal lesions in the brain. He says:

> "On examining the brain, I found a large clot of blood upon the right side of the organ; I measured it, and found it to be three ounces. The brain was remarkably soft; the right ventricle was almost filled with serous fluid. There was no congestion particularly about the brain; the dura mater was not congested. As I have said before, I found no external mark on the head; but on cutting through the scalp on the left side I found a mark. It sometimes happens that the extravasation is on one side and the laceration is on the other. The right eyelid was paralysed."

Under such circumstances, finding the right ventricle filled with serum, the whole substance of the brain being softer than usual, and "without any trace externally or internally of any violence to have caused death," Mr. Elkington could not conscientiously aver that death arose from any other cause than apoplectic extravasation of blood. This opinion appears to have been received on all sides with great surprise. This astonishment would be greatly modified were the critics aware of the difficulty of separating the influence of coincident causes in producing a common effect. In any case, Mr. Elkington has done well to deliver his grave, conscientious judgment, rather than allow himself to be swayed by the popular belief, or moved by common clamour.

THE GRAPE-CURE AT VEVEY.

Nothing so old as the last novelty. The thirst for descent and the assumption of antiquity are as notable in the last new theory as in the last new *parvenu* to greatness. They can all trace their history back to William the Conqueror, or the Cid, or one of the most respected of the patriarchs. Dr. Curchod,* while he intimates that he has no doubt that Noah underwent the grape-cure, from the accounts which have descended to us of his vineyard planting and cultivation of the grape, declines to trace the date of his system further back than the time of the physician Dioscorides, who was contemporary with Nero. He glories over the seven chapters in which Pliny describes the curative power of grapes in diarrhœa, hæmoptysis, pyrosis, biliary vomiting, dropsy, &c.; and cites with satisfaction Celsus, Hieronymus Tragus (Heinrich Boeck), Lonicerus (1557), Dodonæus (1516), Tabernæmontanus (1607), and a host of other writers, ancient and modern, whose combined testimony is held to establish the good opinion which traditional writers have entertained of the therapeutic properties of the unfermented grape. It is very clear, however, to anyone who is acquainted with the manner of conducting the grape-cure in Switzerland and Germany, that this is a practice of which Dioscorides was wholly innocent, and of which Celsus would unquestionably repudiate any knowledge.

In this country it is known only vaguely and by report, and the tales of those who have passed through the cure are very commonly accepted with polite incredulity. But in Germany and Switzerland it has a literature, a public hospital, and a staff of medical directors. Some thirteen or fourteen monographs are devoted to the subject in the German language, and the Swiss press has recently produced two French treatises upon the physiology, therapeutics, and practice of the grape-cure. Dr. Curchod invites all autumnal dyspeptics to seek in this cure at Vevey a distraction, a consolation, or a remedy. One sees at once that this is a courtly remedy, only suited for the *haute-volée*. At least, it is a delightful distraction, after a long suffocation in ball-rooms, to rise at six A.M., to scent the vine beneath the morning sun, to wander through vineyards such as those of Vevey, in sight of the most beautiful lake in the world, and to pluck the fresh grapes moist with the morning dew. This, too, be it observed is the moment at which they are most aperient, so that the grape then offers to high bred and soulful dyspeptics all the *agrémens* of a poetical and efficient laxative. These excursions have however, the inconvenience of producing coldness and dampness of the feet, from the nature of the soil; and thus Dr. Curchod's experience has led him to observe, what others less experienced might be disposed to predict, that such expeditions not uncommonly end in stomach-ache ("ce qui amène presque infailliblement des maux de ventre"). Therefore many physicians think it advisable to eat the grapes while promenading on a dry terrace, or wandering along picturesque but dry roads. The quantity eaten is sometimes prodigious; but excesses are not counselled by the chief authorities in Germany and Switzerland, and the quantities consumed under their direction vary from about four to twelve pounds daily, the amount being slowly increased to the maximum. One sole adjuvant is insisted on by all who direct the cure—free and active exercise in the open air. Few people, we may add, would be the worse for a month's sojourn on the Rhine or at Vevey,—rising at six, living frugally, walking incessantly amid the most beautiful scenery which mountain, river, and lake can furnish. It might not matter to many whether they ate a few pounds of ripe grapes in the day or not. To some persons, however, the cure is insupportable.—Amongst the accidents which it produces are derangements of the stomach, *migraines*, colic, diarrhœa, vertigo, and a peculiar form of stomatitis, which has gained the distinction of being specially mentioned by Rilliet and Barthez in their celebrated treatise on "Diseases of Children." For those who surmount these annoyances, or who discover in the grape a congenial food, we may find in the records of disease cured by this system examples which will supply hope to almost all; for its powers are recited in cases of plethora, dyspepsia, hæmorrhoids, constipation, dysentery, diarrhœa, aphonia, gout, gravel, chlorosis, albuminuria, and iodism, *cum multis aliis*. If increasing popularity have any value as a test, then the grape-cure may challenge attention fearlessly, for increasing numbers flock annually to the Swiss and German vineyards to practise this treatment. No doubt the alimentary *regime*, the exercise, life in the open air, and the *hygienic adjuvants* employed, such as gymnastics, dry and moist frictions, and a proper distribution of the time, without intellectual fatigue or moral preoccupation, so as to gather all the pleasures peculiar to a beautiful country and a fine climate, supply the conditions for material and moral amelioration. A month in the vineyards of Vevey may often advantageously compare with a month at the baths and gaming-tables of the German springs.

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* La Cure des Raisins à Vevey. Par H. Curchod. Paris: Baillière.

THE MARSHALL HALL TREATMENT OF THE DROWNED.

The philosophic method of treatment of the apparently drowned which Marshall Hall bequeathed as the last great legacy of his genius and philantrophy meets daily with new and successful application in cases of accident, and often succeeds most in restoring life where it is apparently extinct. The National Life-Boat Institution, clearly perceiving the vast importance of any improved method for restoring animation to the apparently drowned, and puzzled by the obstinate adherence of the Royal Humane Society to their old and imperfect system, of which Marshall Hall clearly demonstrated the inefficiency in these pages, sought the opinion, by a circular, of the most eminent medical men and medical bodies in this country and on the continent. They received the favorable opinions of three hundred medical practitioners in this country, and of the principal medical societies here and abroad, in regard to Marshall Hall's method, now so universally adopted throughout the profession, and so often the means of saving life. These directions have therefore been extensively circulated by the Society throughout the United Kingdom and in the colonies. They are also in use in her Majesty's fleet. Three cases have just been reported, in which five persons apparently dead have, after long submersion, been successfully treated by the Marshall Hall method, and restored to consciousness. Two of them occurred to bathers in Victoria-park. It is a high merit of this method that its simple rules admit of being practised instantly by an unprofessional person until medical aid can be obtained. It was thus that in these instances life was restored by a swimming-master and by some sailors respectively. In one instance, the person saved was picked up from a capsized boat at sea, and was successfully restored to consciousness by the sailors while bringing him ashore. It was believed that if these means had not been employed during the time occupied in reaching the shore, he would have been past recovery. These facts proclaim their own importance; and while the medical profession can hope to bestow boons of such value on humanity, it may expect to retain its hold on the esteem and gratitude of mankind.

YELLOW OCHRE IN MILK.

Sky-blue ceases to be the favorite color of the London milkmen. There is a fashion in these things. Even the ladies of fashion have deserted the brilliant Eugénie blue, which was the apogee of mode a year or two since, seduced by the newer and brighter tints of Mauve, Magenta, and Solferino. Our London milk is no longer delicately azure, but of a rich yellow, suggestive of abundant cream. How this happens Mr. John Bull, of Cow-cross, learnt accidentally last week from his dairyman's daughter, a confiding innocent of five years old, who called with the afternoon's milk, and, in reply to the question, "What does you father put in the milk, dear?" instantly replied "Only salt water and a little yellow ochre." What a dreadful corruptor of mundane morals is this yellow ochre! Let us be thankful to the little girl, and look for ochre in the milkpail.

CASES OF SECRECY.

Another of the "secrets" practitioners has appeared at the Council House at Bristol, charged with illegal practice. One element of the "secrecy" is usually the adoption of an *alias*, and Mr. J. A. Jacques had practised under the style and title of Blake and Co., Physicians and Consulting-Surgeons. In opening the case on behalf of the Bristol and Bath Medical Registration Association, Mr. Atchley said that it would be seen from the evidence that a young man while at sea, reading a book of the defendant the "Secret Preceptor," containing plates, became very seriously alarmed thereby, and that he went and saw Jacques, who obtained forthwith the sum of £31 from him, and subsequently demanded £50. This person was called, and proved these facts. He proved also that Blake was introduced to him as "the doctor," and undertook to cure him of a "disease,' from which disease, as might be expected, he did not really suffer. The name of "surgeon" was on the door, and the identity of Blake with Jacques was not denied. Nevertheless, the case failed. The magistrate said that—

> "He would go so far as to say that persons, if they wished to be so indecent, might put on their doors every description of name referred to in the Act, and they would not be thought to be committing an offence unless they did so for the purpose of implying that they were practitioners recognised by law. Hence one branch of the information failed. They showed that the defendant did certain acts; but if they could show that he used the title as stated in the information, it would have been an offence. They did not show that he used the names. The case heard some time ago of Dr. Airey was as different as possible to the present. There the justice found that he used certain names for the purpose of implying that he was recognised by law as a legal practitioner. A man might use every title named in the Act, if he did not use it for the purpose of implying that he was recognised as a practitioner under that Act. It was hardly worth while to say the case was dismissed, for they neither show one thing nor the other.
>
> "The case was then formally dismissed."

This is a very important case, and we hope that such gross failures of justice will be avoided by the amendments in the Medical Act.

AID FOR THE WOUNDED IN SICILY.

The humanity of Garibaldi to the sick and wounded soldiers of the Neapolitan army has honored even his high character, and added a new and unfading laurel to the crown of the most chivalrous commander of modern warfare. The memory of sickening cruelties and infamous oppression was only used to hush the passions which might retaliate the like injuries, and to conjure feelings of pity and compassion, which inspired acts of mercy. No soldiers ever deserved more compassionate and skilful attendance than the patriot warriors who fight under Garribaldi's flag, and have known how to succor the vanquished as tenderly as they have conquered them bravely. But many circumstances combine to rob them of that perfect nursing which is always the due of the wounded. The noble generosity of Garribaldi has encumbered him with wounded enemies, whose sufferings place them in the rank of friends. The barbarous bombardment of Palermo has added a long list of casualties, and the hurried preparations which this bold enterprise demanded have not permitted any extended supply of medical necessaries and instruments. The experience of the Crimean war demonstrates how large a stock is needed, and how great an amount of suffering accrues from deficiency of medical appliances. The greater the urgency, therefore, for speedy and immediate help. The heat of the Sicilian summer is an incident highly provocative of hospital gangrene and typhus—the two great scourges of the combined armies in the Crimea, and of the French troops wounded in the late Italian campaign. Opium and quinine are the two sheet-anchors of the surgeon in combating these diseases; charcoal, chloride of lime, and the like antiseptics, are hardly less important; while lint, strapping, old linen, and rollers are of inestimable service in all military hospitals. It is suggested that Galenical preparations of the London Pharmacopœia, or such as have only a local reputation, might not, perhaps be appreciated by the Italian surgeons officiating in the hospitals. But opium, quinine, chloroform, and simple drugs could not fail to be of use anywhere, and amongst any class of practitioners. The first lessons of human charity teach us to sympathize with the sufferings of the wounded in any cause; and it hardly needs the additional stimulus of sympathy with the patriotic devotion and chivalrous tenderness of the soldiers of Garribaldi to urge us to add our mite of help towards any effort to allay the pangs of the wounded and the misery of the sick. Some of the principal firms in London have promised handsome supplies. Amongst them are Messrs. Whicker and Blaise, Savory and Moore, Heather Bigg, Allen and Hanbury, T. Evans and Sons, Ferguson and Sons, F. Walters, and Lloyd Bullock, who have each made munificent contributions, amounting, in some instances, to the value of £50. We learn that, if forthwith collected, means will be found to despatch them immediately by a sure channel. Subscriptions can be most economically applied, since some very liberal offers have been made by the firms which have contributed gifts to furnish all purchased articles at prices from which the profits are deducted. It is a work of pure mercy in which political partizanship has no place, since these supplies will be employed to soothe impartially the sufferings of captured Neapolitans and of Sicilian patriots.

Mortality in Government Emigration.—The mortality on the whole emigration conducted by the Emigration Commissioners during the year 1859, amounted to 104 out of 10,581, equal to 98 per cent. This satisfactory result is due, the Commissioners say, in great measure, to the reduction which they constantly keep in view in the number of young children on board their ships, and also to the experience and ability of the surgeons whom they are now able to retain in their service. In the seven years that have elapsed since the 1st of January, 1853, the mortality in 524 emigrant ships sent out by the Commissioners, carrying 172,233 souls, has amounted to only 2,266, equal to 1·31 per cent. Of the 52 surgeons dispatched to Australia, the Cape, and the East Indies, in their ships last year, 2 only were untried men; of the remaining 50, 3 had made one previous voyage; 3 had made two previous voyages; 10, three; 13, four; 8, five; 7, six: 3, seven; 1, eight, 1, nine; and 1, eleven.

Reviews and Notices of Books.

Mind and Brain; or, the Correlations of Consciousness and Organization, with their Applications to Philosophy, Zoology, Physiology, Mental Pathology, and the Practice of Medicine. By THOMAS LAYCOCK, M.D., &c. 2 vols. 8vo. pp. 884. Edinburgh: Sutherland and Knox.

As the Spaniard's multitudinous appellative made the host open his casement, so the above large title may awaken the "knowledge hunger" of many a reader—we trust with no disappointment to his appetite.

The aim of the author, as it is set forth in his Preface, is to find the middle term or bond of union between metaphysics and physiology, sciences which have hitherto been cultivated in "the divisive method of philosophizing," with results less satisfactory than that which the author hopes to obtain by the correlative method. In the former method there was a fundamental defect, neither metaphysicians nor physiologists attempting "a demonstration of the relations between the laws of functional activity of the organ of consciousness and of the laws of consciousness itself." It may, indeed, be objected to this view that there can exist no relation between things which are identical, except a verbal one. There are relations between Thomas and his book, but there can be none between Thomas's book and the book of Thomas. This view must be taken both by the pure physiologist and the pure metaphysician, the one including the laws of function in those of consciousness, the other those of consciousness in the laws of function.

The author proposes, by a new and very simple method, to throw a scientific bridge across the impassable gulf which has hitherto appeared to separate the phenomena of life and organization and those of thought. This is the method which, like Ithuriel's spear, shall make the true and the false stand confessed and apart:—

"Looking at the two classes of phenomena, and examining what they have in common, this principal is deduced—viz., that whereas Mind designs, Life is designed. Design, therefore, is common to both; but in the one there is a conscious energy of design, in the other an unconscious. And this law of correlation is further manifest—viz., that the results of the vital forces, operative according to a law of design, coincide with the various states of consciousness known as desires, feelings, and the like. Thence a general law of design, with its derivative laws, correlates both the laws of life and of consciousness."

But surely this method will lead rather further than the learned Professor proposes to follow it. Let us change a word, and let the proposition stand thus:—"Whereas mind designs, a table is designed. Design, therefore, is common to both," &c. &c. The evidence of design in the lifeless part of creation, though not so importunate, is as unanswerable as that exhibited in the mechanism of things which have life. From the rolling heavens, God's vast chronometer, to the formation of a crystal, or the floating of a piece of ice, inorganic nature proclaims its author. Design, therefore, is the attribute of more than life and mind, and if it correlates anything, it correlates all things. It is, indeed, universal, like time and space, which correlate all things, if it be correct to impress this wide meaning upon the term correlation. This, however, is not the meaning which scientific inquirers have affixed to this new term. The correlation of the physical forces, in Mr. Grove's admirable little book on that subject, does not imply that the different physical forces have any one attribute in common, but that, under certain conditions, they are capable of giving rise to each other, or of being converted into each other. In the scientific inquiry, pushed one step further by Professor Carpenter, in his papers "On the Correlation of the Physical to the Vital Forces," the term is employed in the same sense; and it is in this sense, and in this alone, it must be used if it be sought to establish the relation which exists between vital and mental activities or forces or functions. The only meaning which can be accurately attributed to the term is "a reciprocal relation, so that the existence of one in a reciprocal state depends upon the existence of the other; as *father* and *son*, *husband* and *wife*." If consciousness and organization, mind and brain, are correlative in this sense, it is difficult to see how the relationship can differ from that existing between function and organ. Metaphysicians, who deal with the development of consciousness alone, may consistently refuse to acknowledge this relationship, but any author who admits the reciprocal dependence of mind and brain, can scarcely dwell with satisfaction upon the metaphysical subtleties of the *ego* and the *non ego*—the subject and the object, the universal and the particular.

The inquiry, however, of the limits in the descending scale of organised existence to which consciousness extends, is undoubtedly interesting to the natural philosopher. Consciousness, or the recognition of self, is probably an attribute of all animal life, and is, in fact, but the self-recognition of individual existence. We cannot, indeed, be certain that much of the lower animal life does possess this attribute, for we know that, under favorable circumstances animal life can and does maintain itself where no consciousness exists; as in a comatose man, or a turtle from which the brain has been removed, or an anencephalic infant during its brief term of existence. We can neither affirm nor deny that the lower animals possess the knowledge of personal and foreign existence, or the elements which, according to Mr. Mansell, ("Bampton Lectures,") enter into "the very conception of consciousness"—namely, the power of distinguishing between one object and another, and of recognising the relation of the conscious person, or subject, to the object of which he is conscious. Professor Laycock is inclined to endow with consciousness organizations to which it has seldom been attributed; but action to a definite purpose seems no sufficient proof of this. The sensitive plant may, he thinks, probably be conscious of the approach of injury when it closes its leaves; but such movement is no better proof thereof than the separation of light sovereigns from those of full weight is a proof that the banker's self-acting weighing machine is conscious. In either case the facts only go so far as to indicate the design of the maker. The solution of this apparently simple question of the nature and range of consciousness, could it be effected, would render the author's task much more easy than he has found it.

Two-thirds of the volumes are devoted to metaphysical description: the doctrines of existence, of ideas, of final causes, &c.; ontology, ideology, teleology, &c. &c. We cannot say that the method adopted of mixing up metaphysics with physiology—a combination not more intimate, and not half so agreeable, as that of the oil and vinegar in a well-dressed salad, appears likely to advance our knowledge of the laws of either mind or matter, of consciousness or organization. We look in vain for the middle term to reconcile and amalgamate the author's belief in intuitive ideas with his not less firm adherence to the doctrines of phrenology. The following is the clearest expression we can find of the author's views on this point:—

"There are potentially present in the man a series of universal, fundamental, and necessary ideas, correlating equally universal, fundamental, and necessary cognitions or truths, with which the faculties are necessarily busied in all present states of consciousness, and which, becoming active in each state, are the necessary causal elements of the thoughts and acts. These are what I have termed the noetic teleiotic ideas......Every fundamental state of consciousness must be coincident with the laws of action of the vital forces, as expressive of teleiotic ideas, and as manifested by the results obtained by that action, in accordance with the law of design. And since these vital forces are but derivatives and correlatives of the physical forces, it follows that those results of their actions which coincide with states of consciousness must correspond to correlative results in the external world; or, to state the doctrine dogmatically, all the intuitive ideas and truths of the human mind are to be discovered inductively, as results of the great law of design, and correspond necessarily, therefore, to the fundamental ideas of the Great Thought of creation."—vol. i., pp. 299, 300.

Although the author expresses his conviction in the operation of such mental forces as "innate ideas, powers, capacities, and intuitions," and "in the universal law of innate tendencies to definite states of consciousness," he does not appear to use the word intuition in its generally received sense. He speaks of defective and predominating intuitions influencing the character. Now, this can scarcely apply to that intuitive knowledge by which, Locke says, "the mind perceives the agreement or disagreement of two ideas immediately by themselves, without the intervention of any other."

We must, however, refer our readers to the author's own pages, if they desire to know more of his intuitional metaphysics, only recommending them to be careful that they do not accept hard words as explanations. For instance, what explanation does the following afford of the passage from intuitional to demonstrative knowledge, from the recognition, without proof, that a circle is not a triangle, to the knowledge which must be founded upon intervening ideas that the three angles of a triangle are equal to two right angles?

"Every teleiotic idea correlates to the consciousness of a primary intuition; and every primary intuition, considered as a causal idea, enters into a long series of derivative ideas which it evolves through, or on the occasion of, experience of the external world, arrived at primarily by means of affinitive impressions."—vol. ii., p. 76.

The latter half of the second volume is occupied with matters which seem more germane to the purpose of a text-book for medical students than the elaborate verbal sonambulism of metaphysics. The subjects of these latter chapters are Mental Physiology and Mental Organology; but even these are rendered far less useful than they otherwise would be, by the affectation of new modes of expression. It is a questionable advantage to the student that old forms of thought should be presented to him in a strange and arduous phraseology. This, for example, is the manner in which the hereditary transmission of personal peculiarities is stated, if not explained, in the chapter on the Laws of Action of Nerve-Cells:—

"Finally, to understand the true properties of these cells, we must bear in mind the important fact, that they are only speculations—impersonations, so to speak—of the law of design. Hence, in considering them, we must remember of what the sperm-cell and germ-cell are capable when integrated, and give those nerve-cells credit for the same potencies. Nor must it be forgot that, somehow or other, the tissues which produce these two genetic cells must be in such relation with the nervous system that the cells which they evolve can, when brought into vital affinity, and a fertile ovum produced, constitute a vital substratum, out of which structures, like these same nerve-cells and ganglia, with all their peculiar activities, will be produced; so that a child will frown, or smile, or grimace like his father, even although he never saw him in life."—vol. ii., p. 367.

We are rather surprised to find an intuitive metaphysician so far gone in the belief, not only of the theory of phrenology, but in that of cranioscopy—the art of its practical application. He admits, indeed, that it may well be doubted whether a minute cranioscopy, founded on the European type, is applicable to all races of men; but he emphatically affirms the validity of the great regional divisions of phrenology:—

"Thus the middle region of the encephalon, whatever it may be (possibly the middle lobe) which corresponds to the central region of the head, of which the crown or centre of the hair is the focus, seems to be the seat of the egotistic faculties: superiorly are the organs of the egotistic sentiments; inferiorly, of the egotistic instincts and propensities. Posteriorly to this region is that of the sexual and domestic instincts and sentiments, in relation, by arterial connexion, with the cerebellum; anteriorly to it, the relative instincts and sentiments termed moral, and which are founded on the intuitions of truth and perfection, good and evil. In close relation with this group are the æsthetic faculties, founded on the intuitions of the beautiful; and, finally, in front, are the organs of the faculties by which a knowledge of the order of phenomena, and of the modes of action of the physical forces, is attained. These are the faculties of observation, deduction and induction, founded on intuitions of the forces. The size of the convolutions will depend, in all cases, on the complexity and number of the intuitions, the extent of corporeal differentiation, and the correlative external relations of the organism."—vol. ii., p. 461.

Here we have rather a full cranioscopy; but how it is reconcilable with an intuitional metaphysic we are not sufficiently enlightened to perceive. The attempt which the author makes to reconcile the two, reminds us of nothing so much as of Baron Von Reichenbach's reconciliation of the belief in ghosts with the doctrines of physical science—namely, that decaying bodies gives forth phosphorescent gases, which, rising from the grave, portray in luminous form the individuals from whom they emanate. For our part, we can believe in the phenomena of decomposition, and we are quite ready to believe in ghosts when we have seen one; but the composite chemical ghost is as much beyond the power of apprehension as a theory of mind which makes it at once the sum of the functions of the brain according to the phrenologists, and the expression of intuitions according to the doctrines of the most antiphysical school of metaphysicians.

Professor Laycock concludes his volumes with an "examination of Dr. Carpenter's claim of priority as to the discovery of the law of unconscious cerebral action." All experience proves that it is of no use to try to convince combatants that the object of contention is of no value; but if we can show that they are not fighting for the same thing, the blessing promised to the peace-maker *may* by possibility be earned. Dr. Laycock, attempting to develop Prochaska's idea of the nature of actions which might take place with the mind either conscious or unconscious thereof—"vel animâ insciâ, vel verò animâ consciâ".—invented for their expression the term of reflex action of the brain. Whether this be more or less than that which was formerly described as automatic motion it is not needful to discuss, but it certainly is not the same phenomenon as that which Dr. Carpenter has attempted to indicate under the title of unconscious thinking. The printer who throws his type into the formation of words and sentences, without thinking of the numerous actions he brings to bear upon the effort, may be said to do some part of his task by means of the reflex action of the brain; but the author, be he mathematician, mechanician, or metaphysician, who, having in vain tried to solve some mental problem, laid it down, and when he next reverted to it found that the unconscious action of the brain had overcome the difficulty, this would be the unconscious cerebration of Dr. Carpenter. The question with regard to Dr. Carpenter's discovery is, whether it is true; with regard to Dr. Laycock's the only question can be, whether it is new. This, indeed, is a question which it is needful to ask respecting all the author's veiws, which are apt, on examination, to turn out very old friends with new *faces*. The phiz may be turned upside down, or be disguised under false front or adventitious curls, but there, if we look close, are the old familiar features. In this respect, how different is the discovery of the reflex action of the brain, which describes no one thing that was not commonly known before, to the discovery of the reflex action of the spinal system, which has immortalized the name of Marshall Hall and which has revealed to us a whole cycle of most important facts, and given an irrefutable explanation of a vast field of phenomena, of the nature of which we were before darkly ignorant! How different the man who plays with words from the one who works with facts! The juggler, with his four or six brass balls in ever-changing motion, without progression, is not "deferentiated" to a greater extent from the inventor of the steam-engine, than the man who weaves the subtleties of metaphysics and the difficulties of physiology into an irreducible tangle is differentiated from the illustrious discoverer of the reflex action of the spinal system, whose name and fame are almost ignored in these volumes of the Edinburgh Professor.

Manual of Human Microscopic Anatomy. By A. Kolliker, Professor of Anatomy and Physiology in the University of Würzburg. pp. 633. With 249 Illustrations. London: John W. Parker.

This is a new translation, published under the author's own superintendence, of the German work, which is already favorably known to a great part of the profession through the able translation of Messrs. Busk and Huxley, published in 1853–54 by the original Sydenham Society. Deeming the circulation of the former edition to be necessarily of a limited character, Professor Kölliker has thought it well to put forth a new translation, that should contain all the advances and discoveries which the rapidly-progressing science of histology has made known up to the present moment. In the Sydenham edition, the translators introduced many passages from the large Microscopic Anatomy of the same writer, which served to illustrate more forcibly some parts of the original work; and we find in this new edition that the author has followed their lead, and has incorporated in the body of the work many of these additions. The former editors (Busk and Huxley) found occasion also to add observations, in the form of notes, expressing a difference of opinion as to some points treated of by the author, and these we find alluded to, and in some cases accepted, in the new edition.

For the sake of those of our readers who may not have become acquainted with the work in its previous form, we will shortly indicate the arrangement and plan of what must be for some years our standard authority on Human Microscopic Anatomy. It consists of two distinct parts, the first embracing General Histology, and the second Special Histology. Under the first head are comprised the nature of the elements of the organization—cells, fibres, &c., together with the investigation of the several tissues of which the organs of the body are constituted, and it is in this portion of the work that the principal novelties and alterations occur. Thus, for instance, Professor Kölliker has materially modified his opinion as to the occurrence of free cell-formation, considering it to become more and more doubtful the further the investigation is prosecuted; while he lays great stress upon the multiplication of cells by division, as occurring not only in ordinary cell-tissues, but within other cells, producing what is termed the "endogenous formation of cells by division," which is the ordinary mode of growth of cartilage. The "Tissues of Connective Substance" (Bindegewebe of German pathologists) are noticed in a new section (§22). and are divided into the *mucous tissue*, *cartilage tissue*, and the *connective* or *areolar tissue*, their close relation one to another and to osseous tissue being strongly insisted on, while the nature of each is subsequently considered *in extenso*. In considering muscular tissue, the close resemblance between the striped and unstriped muscular fibre is insisted on, and both, though hitherto considered perfectly distinct, are placed under one head. No new facts are brought forward as regards nervous tissue.

The latter and larger portion of the work, under the head of Special Histology, gives at length the microscopic characters of the various organs of the body, comprised under the several systems, Nervous, Digestive, Vascular, &c. There is but little novelty or alteration in the writer's views from those expressed in the former edition, excepting as regards the development of the teeth, where we find Professor Kölliker laying down (both from his own and a pupil's observations) that, first, the dentinal canals are direct processes of the whole dentinal cells; and, second, the matrix of the dentine is not formed of the dentine-cells, but is a secretion of these cells and of the tooth-pulp—in other words, an intercellular substance. Huxley's statement respecting the existence of a delicate membrane upon the surface of developing enamel is confirmed, but space will not allow of our entering into the explanations which are offered respecting this tissue.

It is only due to the publisher to say, that the numerous engravings have all been newly cut, and are of great beauty; and that while some which appeared in the old work are omitted, several new ones have been added, to illustrate the new views expressed in the text.

While upon the subject of Microscopic Anatomy we may venture to draw the attention of those of our readers who take an interest in the subject to a collection of beautiful—we may say marvellous—microscopic preparations and injections which have been imported from Germany by Messrs. Smith and Beck, and which will well repay an inspection.

Diseases of the Heart; their Pathology, Diagnosis and Treatment. By W. O. Markham, M.D., Physician to, and Lecturer on Physiology and Pathology at, St. Mary's Hospital, &c. Second Edition. pp. 276. London: Churchill.

Four years back, Dr. Markham, being of opinion, we presume, that the classical treatises of Hope, Latham, Stokes, and Walshe had done but little in extending generally to the profession a knowledge of diseases of the heart, undertook to put it in possession of something more to the purpose than it had as yet obtained. He had become, he tells us in the preface to his first edition,

> "Particularly anxious to place in their true positions two divisions of the subject—namely, the pathology and the treatment of acute cardiac diseases; and endeavor to state in clear terms the knowledge which we possess of the one, and what reasonable degree of faith experience warrants us in placing in the efficacy of the remedies which we employ in the other."

The anxiety here expressed was evidently born of extreme kindness towards the advancement of Medicine, if it had not its origin in an exuberant modesty. Dr. Markham accordingly favored us with a treatise setting forth, as he tells us (preface to the first edition) "the view which I take of the pathology, and the manner in which I have wished to apply it to the interpretation of diseases of the heart." This treatise was, in our opinion, characterized by two very salient features; one was, the extremely self-satisfied and pseudo-philosophic style in which it was written; the other was the remarkably small amount of original information it contained. We must confess it—we were not very much surprised at these most serious drawbacks. The conceit of the style was in unison with the pretentiousness of the author—the barrenness of novelty, in harmony with Dr. Markham's want of experience. Dr. Markham could have gone through, necessarily, but very few years of practice, and yet he deemed himself ready to supplant some half-dozen of the ablest practical writers of his time. We read the work carefully, and came to the conclusion that if the author had chosen to wait some ten years longer, he might, perhaps, have done justice to himself; but that all he had proved to us seemed to be, that he was a rather facile writer, quite as much conversant with the pen as with the stethoscope. The consequence of this is now before us. We have a new edition of the book, which we are told in the present preface has been

> "In great part re-written, and the rest of the work has been carefully revised. This revision was required by the advances which have been made in our knowledge of the pathology and treatment of cardiac diseases since the first edition of this work was published."

So that the oracular voice of 1856 spoke that only which turns out to be in a short time of no moment, and the woudrous pages have to be "in great part re-written," in order that they may approach the mark of the present day! But we scarcely think that upon this point the author—marvellous as it may appear—does himself justice. *We* do not believe that the *last four years* have so completely changed the doctrines of cardiac pathology as to necessitate any work of even ordinary qualities to be almost entirely re-written. But as regards the standard works of Stokes, Walshe, Corrigan, and Latham, such an idea would be simply ridiculous; these works are in all essential points as truthful in doctrine and as safe guides in practice as they were when first published. The assertion that the clinical teachings of the able physicians we have just named have been generally set aside by the lucubrations and transcendentalisms of some recent young physiologists and theoretical pathologists, is as erroneous in itself as it will be found to be mischievous in its operation.

The eminent authorities we have alluded to have given us the results of years of truthful observation at the sickman's bedside—results necessarily very different in value and stability, be it remembered, from those of the most ingenious theorizings of young and ready writers within the field of pathological polemics. To the recollections of such as are yet unsettled in their faith, we would recall that apothegm so extremely applicable to medicine—viz., "Was sich im Umgang der Natur und in ihrem Anschauen entwickelt hat mehr Werth als alles Erdachte oder Erlernte. Das allein hat nur wahres Leben—d. h., den Geist der Natur und ist so ewig wahr wie sie." If such be the truth, then, that valuable legacy of the results of the *experience* of the great and practical men who make up the *catena aurea* from Sydenham to the present time, cannot truly be rendered valueless within the domain of bedside medicine by any power of depreciation which the most ingenious theories upon the nature of inflammation, and *modus operandi* of mercury, &c., evolved in the library, can hope to bring against it. These latter may be all very well in their way, but it must be kept in mind what that way is. It is probably because Dr. Markham feels that he really has not anything more directly bearing upon diseases of the heart and their treatment to tell the profession than what they are already acquainted with that he is to be found so constantly taking the opportunity of sliding off into litigated questions of general pathology. To have contemplated almost at the beginning of one's professional career writing upon the pathology, diagnosis, and treatment of diseases of the heart, in the face of the clinical experience of Hope, Stokes, Walshe, Latham, and Corrigan, was a bold idea, though a very conceited one. A strong reason, therefore, must be found to render the attempt excusable. The justifiable motive would appear to exist in the "rational scepticism in the orthodoxy of traditional medicine" asserted by Dr. Markham to be prevailing; and, says our author,

> "Surely there is nothing surprising in the change which has thus passed into the practice of medicine. The whole series of facts upon which rational medicine is founded have during the past few years been absolutely revolutionized, and necessarily therefore, and logically enough, medical practice has likewise undergone a thorough reformation."—Preface to Second Edition.

Hence then, we presume, arises the necessity for us to close the pages of Walshe and Stokes, and open those of Dr. Markham. We beg to decline the invitation. We deny the absolute revolution insisted upon, and most assuredly refuse to acknowledge the author as one of the reformers to be followed in medical practice.' Dr. Markham is, as we have already stated, a facile writer, but as a clinical authority why—'

"Vixere fortes ante Agamemnona."

On the Nature, Prevention, Treatment, and Cure of Spinal Curvatures, and Deformities of the Chest and Limbs, without Artificial Support or any Mechanical Appliances. By Mrs. Godfrey. Third Edition. London: Churchill.

The authoress of this pamphlet is the wife of a surgeon of Liverpool, who having, it appears, first assisted her husband in the treatment of deformities, has started on her own account with the invention, of what she considers an entirely new mode of treatment. That this treatment is affirmed by its authoress to be eminently successful,—in fact, to supersede treatment of every other kind,—is no more than we should expect in a book of this class, written as it evidently is, not so much for the profession as for the public. What the system is, we are, unfortunately, not informed; for, apparently, it is indescribable, and the authoress repeatedly states her opinion, that it is impossible "to teach, in writing, how the work is to be done." We presume, however, that it is essentially some complicated series of manipulations, since great stress is laid upon "the power of the peculiar touch"—whatever that may be. Granted, that manipulations may, in many cases of spinal curvature, be advisable and advantageous, we doubt whether Mrs. Godfrey's anatomical knowledge (upon which she plumes herself considerably) is of a character to lead to correct diagnosis or appropriate treatment. When we find delight expressed at "the discovery (!) that every muscle terminated in a tendon, and each tendon was inserted in a bone,' —when the spinal and sympathetic systems of nerves are jumbled together, the latter being termed "*the intercostal nerve*," and gross errors respecting the nervous supply of the various parts of the body are of frequent occurrence, we can only wonderingly admire, and place implicit faith in the sentence with which the authoress concludes—viz., that "for the principles contained in the above statements, she is indebted chiefly to Fyfe, partly to *Walker*."

The usual number of entirely successful cases is, of course, appended, and then, in a second part, follow some remarks upon Dress, Aliment, and Exercise, which show that when Mrs. Godfrey confines her attention to subjects within her grasp, she can give sensible and suitable advice on the physical education of children; and we would therefore suggest to her to study pædiatrics rather than orthopædics for the future.

Every allowance may be made for Mrs. Godfrey's husband allowing such a work to appear, though one would expect even a member of the College of 1811 to be aware of some of its glaring errors.

A Clinical Treatise on Diseases of the Liver. By Dr. Fred. Theod. Frerichs, Professor of Clinical Medicine in the University of Breslau. In Two Volumes. Vol. 1. Translated by Charles Murchison, M.D. &c. &c. pp. 302. London: The New Sydenham Society.

This, the first instalment for the second year's series of the New Sydenham Society, will give the merely English reader a good idea of the happy combination of scientific and practical knowledge which the Breslau Professor is admitted to possess. His work upon the Liver is marked by originality of physiological doctrine and soundness and extent of clinical facts. His theory of the production of jaundice, however, has given rise to much argument and opposition; but it must be admitted that the late investigations of Folwarczny, Staedeler, Neukomm, and one or two others, strongly tend to support Frerichs in lieu of his opponent, Dr. Kuhne. The present and first volume contains the historical account of diseases of the liver; the definition of its dimensions and weight: and chapters upon icterus, acholia, acute and chronic atrophy, the fatty liver, the pigment liver, and hyperæmia and hæmorrhage of the hepatic organ. The inflammatory affections, morbid growths, &c., will occupy consideration in the second volume. Dr. Murchison informs us in his preface that

> "Although only the first German edition has as yet been published, most of the corrections and additions for the second edition have, through the kind co-operation of the author, been incorporated in the present English translations."

Frerich's book is one of those treatises that will frequently be taken down from the bookshelves to be consulted both by physiologists and physicians. The members of the Sydenham Society hereby receive a good work, one which is useful as a guide both in practice and in scientific inquiry. We highly approve of the selection by the Council, and also of the mode in which Dr. Murchison has thus far done his duty as translator and editor. Saving a few Scotticisms, the translation is excellently written. The merit due to this gentleman for his care and trouble is by no means inconsiderable.

Das Corrosive Geschwür im Magen und Darmkanal (Ulcus Ventriculi perforans s. chronicum rotundum), und dessen Behandlung Von Dr. Ludwig Müller, Practischen Artz, &c., in Minden. Erlangen, 1860. S. 274 and 2 Tabellen.

Corrosive Ulcer of the Stomach and of the Intestinal Canal, and its Treatment. By Dr. L. Müller, Practising in Minden. Erlangen, 1860.

This is a very full and good exposition of the important subject of gastric ulcer. It is true there is nothing very *novel* in Dr. Müller's essay, and it can scarcely be said to add anything material to our knowledge of those leading characters of the disease which are so concisely but well laid down in the recent work of our countryman, Dr. Brinton, upon "Ulcer of the Stomach." The book, indeed, is rather characterized by its copious illustration of the varieties of the morbid state in question, and the numerous complications with which it is associated. The literature of this country and the continent has been well searched to enable the author to elaborate his views, and the result is a very satisfactory *résumé* of one of the most interesting and insidious diseases which afflict humanity

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Handbuch der Historisch-Geographischen Pathologie. Bearbeitet von Dr. August Hirsch, in Danzig. Erster Band, Zweite. Abtheilung, Chronische constitutionelle Krankheiten. Erlangen, 1860.

Handbook of Historico-Geographical Pathology. By Dr. August Hirsch, of Danzic. Erlangen, 1860.

We have here the second part of the first volume of a work which is likely to obtain considerable reputation. In the present portion Dr. Hirsch treats of the historic and geographic relations of "chronic constitutional diseases"—such as leprosy, syphilis, scrofula, cretinism, gout, rheumatism, beriberi, &c. The profession are informed that the third and concluding part of the work will shortly appear. Dr. Hirsch's treatise is intended in its general arrangement and scope to approximate as closely as possible to the well-known "Handbook of Special Pathology and Therapeutics," edited by Professor Virchow, to which it will not be an unfitting accompaniment. It is only to be hoped that Dr. Hirsch will not follow his model in the slowness with which the work that Virchow edits proceeds.

A System of Surgery, Pathological, Diagnostic Therapeutic, and Operative. By Samuel D. Gross, M.D., Professor of Surgery in the Jefferson Medical College of Philadelphia, &c. Illustrated by 936 Engravings. Two vols. 8vo. Philadelphia: Blanchard and Lea. London: Trubner and Co. 1859.

Dr. Gross has long been favorably known to English surgeons by his elaborate work on Diseases of the Urinary Organs. It will be admitted on all hands that the work was a valuable contribution to the literature of our profession. It appeared to be, not only a faithful record of the experience of a surgeon well qualified to speak on the subjects of which he treated, but an unprejudiced history of the results to which other laborers in the same field had arrived. Of the colossal volumes becomes before us, it would be all but impossible to give anything like an analytical notice; indeed the very table of their contents would occupy more space than we could afford in this department of our journal. The object of the author has been, as he states in his Preface,

> "To furnish a systematic and comprehensive treatise on the science and practice of surgery, considered in the broadest sense; one that shall serve the practitioner as a faithful and available guide in his daily routine of duty."

Has Dr. Gross satisfactorily fulfilled this object? A careful perusal of his volumes enables us to give an answer in the affirmative. Not only has he given to the reader an elaborate and well-written account of his own vast experience, but he has not failed to embody in his pages the opinions and practice of surgeons in this and other countries of Europe. The result has been a work of such completeness, that it has no superior in the systematic treatises on Surgery which have emanated from English or Continental authors. It has been justly objected that these have been far from complete in many essential particulars, many of them having been deficient in some of the more important points which should characterize such works. Some of them have been elaborate—too elaborate—with respect to certain diseases, while they have merely glanced at, or given an unsatisfactory account of, others equally important to the surgeon. Dr. Gross has avoided this error, and has produced the most complete work that has yet issued from the press on the science and practice of Surgery. It is not, strickly speaking, a Dictionary of Surgery, but it gives to the reader all the information that he may require for his treatment of surgical diseases. Having said so much, it might appear superfluous to add another word; but it is only due to Dr. Gross to state that he has embraced the opportunity of transferring to his pages a vast number of engravings from English and other authors, illustrative of the pathology and treatment of surgical diseases. To these are added several hundred wood cuts. The work altogether commends itself to the attention of British surgeons, from whom it cannot fail to meet with extensive patronage.

LECTURES ON FEVERS:

BEING

The Lumleian Lectures,

DELIVERED BEFORE THE

ROYAL COLLEGE OF PHYSICIANS OF LONDON, 1858–59;

COMPRISING

A DESCRIPTION OF THE DISTINCTIVE CHARACTERS, PATHOLOGY, AND TREATMENT

OF

THE SEVERAL FORMS

OF

CONTINUED FEVER.

BY

ALEXANDER TWEEDIE, M.D., F.R.S.,

Fellow of the Royal College of Physicians, Physician to the London Fever Hospital, to the Foundling Hospital, Examiner in Medicine in the University of London,
etc. etc.

LECTURE XII.—(*Concluded.**)

SEQUELÆ OF CONTINUED FEVER.

Relapse—wakefulness—mental imperfection—inflammation of the eye—pulmonary tuberculosis—bronchial catarrh—sweating—diarrhœa—pyæmia—neuralgia—anasarca—phlebitis—gangrene of the extremities—bed-sores.

Having considered the treatment applicable to the several forms of continued fever, I have shortly to draw your attention to the management of its sequelæ; for although the cessation of the symptoms, or stage of convalescence, proceeds, in a large proportion of cases, uninterrupted by any untoward event until health is finally established, sometimes this onward course is interfered with by some unlooked-for event requiring special treatment.

Relapse.—A recurrence of fever occasionally takes place, and in most instances may be traced either to over-taxing the strength too soon, exposure to cold, or to indiscretion in diet. In either case the remedy is simple and obvious, and the indisposition is seldom protracted beyond a day or two. If it last longer, the whole phenomena of the fever has either been renewed, or some intercurrent local affection has supervened. You may remember that I pointed out the tendency in enteric fever to inflammation in serous membranes; and it is no uncommon circumstance to trace the connexion between an apparent renewal of fever during the convalescent stage and lurking inflammation in some organ—very often of the chest. On the other hand, you must bear in mind the possibility of a sporadic case of true relapsing fever occurring in an epidemic of either enteric or typhus fever, though by attending to its peculiar diagnostic features there is little difficulty in detecting it.

Wakefulness.—This we have seen to be a very common symptom in both forms of fever, and although the return of refreshing sleep is one of the surest signs of approaching convalescence, many patients continue restless and sleepless, even after every other symptom has disappeared. Nor is the sleeplessness apparently connected with antecedent cerebral affection, as it occurs as often in the mild as in the severer cases. The convalescence being retarded by the wakefulness, it is necessary to overcome it; and this may sometimes be effected by a tablespoonful of brandy, or two or three of sherry, in warm water or arrowroot, or half a tumbler of Burton ale, at bedtime. If these do not succeed, there is no alternative but the exhibition of opiates—the common laudanum, Battley's laudanum, morphia, or henbane. I have known it necessary to continue the opiate for weeks after the convalescence was in other respects confirmed; and let me observe, that when it is determined to discontinue it, it is better not to apprize the patient, or even the nurse, of the intention, but to withdraw the narcotic from the prescription, and to practise the harmless deception of administering to the mind only.

Mental imperfection, notwithstanding the frequent and often severe lesions of the brain in both forms of fever, is singularly rare. Mania or general incoherence is almost unknown as a sequence, and even should some slight impairment of intelligence remain after an unusually severe cerebral affection, it is, as far as my experience goes, temporary only, and in due time disappears. In some cases a certain degree of mental dulness, or incapacity to fix attention on matters which used to interest, after the general symptoms have vanished, may be perceptible, or perhaps the memory may be in some degree defective, but these are never permanent, and gradually disappear as the convalescence becomes established. Nor is *deafness*, so often present at some period of the disease, persistent; for although the sense of hearing may be dull even for weeks after the stage of convalescence, it is ultimately, with very few exceptional cases, completely restored—differing in this respect from the deafness resulting from the destructive otitis following the exanthematous fevers, and which generally permanently destroy the sense of hearing. It may, however. be necessary, when the deafness is protracted. to employ local remedies, with the view of stimulating the auditory nerve, or, should slight effusion have taken place around it, of promoting its absorption. Any of the ordinary counter irritants may be applied behind the affected ear, or to the nape of the neck, such as the compound camphor liniment, sinapisms, or the most powerful liquor lyttæ.

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* From accidental misplacement the above lecture fails to obtain its proper place in the Number.

Inflammation of the eye occasionally comes on after fever. It is sometimes confined to the conjunctival membrane; but it may be of a more severe character, involving the internal structure of the eyeball. Mr. Hewson[*] has given the details of cases of ophthalmia succeeding to typhus fever, and it has also been described by Dr. Jacob[†] and Mr. Wallace,[‡] as having occurred after the Dublin epidemic of 1826, and after the Glasgow fever of 1843, by Dr. Mackenzie. It appeared likewise in a few instances after the Edinburgh epidemic of the same year, described by Dr. Cormack. I have seen it occasionally in the Fever Hospital, chiefly in children, whose constitutional powers were much impaired by want, and living in crowded, ill-aired dwellings. It seems to have occurred frequently in the Dublin epidemic of 1826-7; for Dr. Jacob states that he had met with seventy or eighty cases within the year, all being of the severer forms of internal inflammation of the eye. The ophthalmia comes on sometimes during the fever, but more frequently a few weeks after convalescence, or even much later, and is almost invariably confined to one eye. According to Dr. Jacob, the transparent parts are rendered more or less clouded and opaque, the circumference of the cornea assuming a whitish or grey appearance, presenting an opaque circle resembling the arcus senilis and the anterior chamber of the eye appearing cloudy, probably from thickening of the membrane of the aqueous humour. The lens itself often becomes partially opaque, reflecting light falling obliquely upon it, and presenting an opaline amber color, and in this way vision is apparently destroyed. The iris, too, becomes altered in color, and loses its brilliancy, and though in some cases its motion is unaffected, in others it is sluggish, and the pupil more or less irregular. In some cases pus is deposited in the anterior chamber. As may be anticipated from the severity of the inflammation, vision is more or less impaired, some patients being only able to distinguish light from darkness, though it has been remarked that the imperfection of sight is not always in proportion to the extent of the inflammatory action, but often greatest in the mildest form.

In the cases observed by Dr. Mackenzie in the Glasgow epidemic of 1843, the attack of opthalmia occurred at periods varying from three to sixteen weeks from the commencement of the fever. The character of the affection appeared to him to be congestion followed by inflammation of the internal parts of the eye, and especially of the iris and retina. The capsule of the lens, lining membrane of the cornea, and the sclerotic, subsequently became involved, the conjunctiva being but slightly affected. These appearances were accompanied by severe pain in and around the eye, aggravated during the night, considerable lachrymation, and dimness of vision. In some instances the inflammation was apparently limited to one or two textures only, as the lining membrane of the cornea and the anterior crystalline capsule. In others, when the vital powers are much depressed, the cornea sloughs, the iris protrudes, the humours escape, and the organ is destroyed—an event I have occasionally witnessed in malignant typhus.

Dr. Jacob tells us that the treatment of this inflammation of the eye is not attended with much difficulty. Bleeding, locally or generally, in proportion to the urgency of the symptoms, blistering where there is much pain or intolerance of light, purgatives, antimonial medicines, and opiate stupes are obvious means of relief. Dr. Mackenzie, too, thinks that bleeding can rarely with safety be dispensed with, the recovery being very slow and uncertain when it is neglected. Some cases in children he treated by leeching; but in adults, venesection was always necessary.

The treatment must, however, depend on the circumstances of each individual case. In many, the powers are so depressed that even local depletion cannot be sustained. Blisters applied to the temple and forehead, warm fomentations to the eye, secluding the light, keeping the eye clean by frequent sponging with tepid water, and applying the linimentum calcis to the tarsal borders two or three times a day, embrace the local treatment, while the general strength is supported by suitable nourishment, and even wine, according to circumstances. Dr. Jacob speaks in favor of the extract of belladonna applied round the affected eye, and with this he combines calomel and opium until the necessary mercurial effect is produced. But I should hesitate, as a general rule, to exhibit mercury in these ophthalmic cases, and should anticipate better results from a mild sustaining plan, of which quinine forms a part combined with soothing local treatment.

Pulmonary tuberculosis has been supposed to be one of the sequelæ of enteric fever; but although it may in some instances be a nice point to distinguish the one disease from the other, pulmonary consumption, so far as my observation goes, cannot be regarded as a sequel of either enteric or typhus fever. From the frequency of this disease in Britain, it may naturally be expected that consumptive persons should be attacked with fever; and it is moreover possible that if, in its progress, a pulmonary affection arise the latent tuberculosis may become developed.

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[*] Observations on the History and Treatment of the Ophthalmia accompanying the Secondary Forms of Lues Venerea, pp. 109—114.

[†] Transactions of the Association of Fellows and Licentiates of the King and Queen's College of Physicians, vol. v.

[‡] Medico-Chirurgical Transactions, vol. xiv., p. 266.

and pulmonary consumption established. In this way only can phthisis be fairly considered to be a consequence of fever of any form. It is a common circumstance in examining the bodies of persons who have died of fever, to find disseminated tubercles in the lungs and perhaps in other organs; but such appearances are in no way connected with the antecedent fever, except as a coincidence.

Bronchial catarrh.—When there has been a catarrhal or bronchitic affection of the lung during the fever, cough and expectoration often remain for some time after, depending on the persistence of the pulmonary disease in a subacute or chronic form. This generally subsides in time, but it should not be left unnoticed, and it is in such cases that direct tonics are specially useful—such as the various preparations of steel, quinine, or zinc—in checking the bronchial congestion on which the cough and expectoration depend.

Empyema, as a termination of pleurisy supervening on enteric fever, has been already noticed. It can scarcely be called one of the sequelæ, but as it may be the only remaining lesion and keep up an irritative secondary fever, it may be regarded as a consequence of the pre-existing enteric fever. When the amount of fluid is considerable, specially if it be purulent, there is little chance of its becoming absorbed, and it is almost hopeless to expect benefit from remedies supposed to promote absorption—mercury, iodine, or blistering. There is certainly one resource—evacuating the accumulated fluid by tapping the chest. But with what prospect of success!

Sweating.—Towards the conclusion of fever free perspiration often takes place, and has generally been thought to be critical; but when once established, it is apt to continue after convalescence and retard recovery of strength. It generally comes on in the night or towards morning, and has a sour, disagreeable odor; and as it is not only uncomfortable to the patient's feelings, but proves exhausting, it should be checked. The nitrate of bismuth, oxide of zinc, quinine, or the mineral acids, generally control it. Sponging the skin with vinegar and water twice a day should not be omitted, the patient being at the same time encouraged to leave his bed.

In the *gastric system* we occasionally observe indications that some part has suffered prominently in the course of the pre-existing fever. For example, after typhus, when the patient has previously been subject to dyspeptic irritation, the tone of the stomach is feeble, and requires that the diet be carefully regulated during convalescence. Even with due attention to dietetic management, the patient often complains of epigastric uneasiness after food, followed by flatulent distension and acidity. These symptoms may occur also after enteric fever under the same circumstance of previous tendency to dyspepsia; and you may remember that, in speaking of the lesions incidental to this disease, I stated that softening of the mucous membrane of the stomach was not uncommon, and that its existence might be suspected when there was unusual irritability of the organ, especially vomiting, at any period of the fever. The treatment of the milder forms of gastric disorder consists in allowing only such articles of food as the stomach can digest easily, regulation of the bowels, and the exhibition of light bitters, such as calumba or cascarilla, with the addition of small doses—five to ten minims—of the tincture of nux vomica two or three times a day. The severer forms, accompanied with vomiting, require the application of turpentine stupes, or a blister to the epigastrium, with the exhibition at intervals of the nitro-muriatic acid, and a single drop of Scheele's acid, in infusion of orange-peel. Creasote, alone or combined with laudanum or hydrocyanic acid, often answers well; and I have seen excellent effects, in obstinate cases, from bismuth or the nitrate of silver in minute doses.

Diarrhœa.—It is not unusual after enteric fever to observe the evacuations from the bowels continue thin and unformed. This may arise either from an irritable or congested state of some portion of the mucous membrane of the intestine, or from the intestinal ulcerations not having completely cicatrized. But it is always important to attend to this symptom, which interferes with the recovery of strength, and may, moreover, should it depend on ulceration, become ultimately of serious import. If it do not yield to strict regulation of diet, and opium in some form in an oleaginous or mucilaginous mixture, the treatment formerly recommended for this special intestinal affection must be resumed.

The *spleen* sometimes continues enlarged after convalescence from either enteric or typhus fever, occupying a larger space than usual in the left hypochondrium. In general, however, it gradually regains its natural dimensions under the prolonged use of quinine.

Pyæmia.—The pathology or nature of this affection is indicated by its name—admixture of puriform fluid with the blood. It was first described as a distinct disease in 1838, by Tessier, under the title of *purulent diathesis*. It is also known under the name of purulent infection.

Pyæmia may arise as a primary affection—that is, independent of, or not preceded by, any other disease (this is, however, rare); or, as in the greater proportion of cases, as the consequence of some acute specific disease, in which way it becomes one of the sequelæ of continued fever. It may also follow wounds or injuries of parts, and uterine phlebitis.

It is presented to our observation under different forms:—1, of disseminated abscesses in the subcutaneous cellular tissue: 2, of deposit of puriform fluid in serous cavities, especially in the larger joints; 3, of deposit of a similar fluid in the substance of internal organs—the lungs, liver, and spleen more especially. It occurs at all ages, often in the most insidious manner without warning of its advent, in the form of one or more purulent deposits in the cellular tissue, which are often regarded as critical and, when of small size, are generally absorbed Although such collections of puriform fluid are seldom accompanied by much constitutional disturbance when deep-seated and extensive, they induce an irritative secondary fever, which persists until the matter is discharged, either spontaneously or by surgical interference. But when the fluid accumulates in the joints, or, as more rarely happens, in the serous cavities of the chest or abdomen, or their contained viscera, the constitutional disturbance is severe. There is prolonged shivering, followed by intense heat of skin and flushing, acute headache, and, perhaps, delirium, rapid wiry pulse, intense thirst, and altered countenance. These symptoms are followed by acute pain in one or more of the larger joints, resembling rheumatism, to which succeed swelling and obscure sense of fluctuation, while on different portions of the skin erythematous patches sometimes appear. As the local affection proceeds, the symptoms of the accompanying fever become aggravated; the skin assumes, in many cases, a sallow or even icteroid hue, the pulse becomes weaker, the tongue more dry and brown, the teeth and lips covered with dark sordes, with evidently increasing prostration, restlessness and muttering delirium, or coma and subsultus. Such severe examples generally prove fatal before the end of the second week, sometimes earlier; but the patient may linger for weeks, and ultimately die from the purulent poisoning.

In regard to the precise nature of the purulent infection, which bears, in some respects, a strong analogy to erysipelas, though there be no question as to its origin in the admixture with the blood of some morbid product having a close resemblance to pus, there is much difference of opinion as to the precise nature of the morbid matter, as well as the mode in which it gets into the circulation. Tessier believed it to be some modification of the organism characterized by a tendency to suppuration in the solids and coagulable fluids. On this theory Dr. Jenner remarks,* that amid much that is pathologically erroneous, the doctrine appears to contain an important truth—viz, that in a certain number of cases the febrile disturbance is established before any local disease is set up, and consequently before any pus is formed, and, by inference, that the abscesses are, in such cases, merely the effects of a special alteration of the element from which that blastema is exuded out of which they are developed.

Sédillot affirms that the circulation of pus-corpuscles with the blood is the sole cause of pyæmia on the following grounds; 1. the invariable pre-existence of a centre of suppurative action; 2. the relation observed between the formation of pus in the veins, the passage of that liquid into the blood, and the development of pyæmia; 3, the presence of pus in the blood, verified by observation; and 4, the results obtained by the injection of pus into the veins of animals. Dr. Jenner disputes these conclusions, and adduces two cases to prove that pyæmia may exist without pre-existing abscess or ulcer, and denies that there is evidence of the relation between the formation of pus in the veins, its passage into the blood, and the development of purulent infection; or that pus can be detected in the blood; and as to the effects obtained by injecting pus into the veins of animals, he states that, as the symptoms and the situation of the disseminated abscesses are different in cases of purulent infection and artificially-induced pyæmia, it is improbable that the disseminated abscesses in the two have their origin in the same cause.

From these statements, it is evident that pathologists are not agreed either as to the origin and characters of the deleterious fluid, or the mode by which it becomes mixed with the blood.

In regard to the treatment of purulent infection, there is little to be done beyond combating urgent symptoms and supporting the strength by nourishment, wine, and quinine. Opiates to soothe the nervous excitement and procure sleep and relief from pain are indispensable, and should be given not only at bedtime, but at intervals during the day; while opiate fomentations are applied to the regions in which the purulent formations take place.

Neuralgia.—At the termination of an attack of fever, the patient sometimes complains of pain in the lower extremities, often limited to the soles of the feet, and evidently of a neuralgic character. In some cases there is marked hyperæsthesia of the cutaneous nerves, the slightest touch, such as passing the finger over the skin, giving pain more or less acute. In others, there is some degree of numbness or slight loss of power in the lower limbs, which alarms the patient while it lasts, but I have never known it permanent. It is seldom necessary to do anything in the way of treatment in either of these affections, which are only temporary, and disappear under the tonic treatment applicable to the period of convalescence. If the numbness and loss of power persist, small doses of the tincture or extract of nux vomica may be prescribed, with stimulating frictions of the affected part with the horsehair-glove, or an embrocation containing tincture of arnica and ammonia.

Anasarca.—Œdematous swelling of the lower extremities occasionally appears, and seems generally to depend on local weakness, the capillaries being unable to resist the gravitation of the blood when the erect posture is assumed. It is seldom necessary to interfere further than to place the limbs in a horizontal position until the strength is restored, and to give local support by a well-applied bandage.

It is well to be aware, however, that in some instances of anasarca consequent on fever, the urine, on being tested, exhibits albuminous impregnation, showing the anasarca, under such circumstances, to be connected with a congested condition of the kidney and atony of its secreting structure. The renal congestion and impoverished state of the blood permit the escape of serum with the urine, which consequently becomes albuminous, and it is thus that the disappearance of the albumen under the use of tonics is explained. The albuminuria thus induced may become more or less obstinate, and the secreting apparatus of the kidney ultimately spoiled; and hence the possible origin of Bright's disease from fever, and the importance that it should be detected in its early stage, and receive appropriate treatment.

Phlebitis.—There is another form of swelling of the lower extremities which occasionally appears in the convalescent stage. It is a painful swelling of one limb, analogous to the phlegmasia dolens of puerperal women. It occurs both in males and females, and was first described by myself in the thirtieth volume of the *Edinburgh Medical and Surgical Journal.* It is indicated by a sensation of stiffness in moving the affected extremity, which becomes uniformly enlarged and painful, especially at the inguinal region. The swelling has a white glistening appearance, without increased heat, and does not pit on pressure. It is possibly due to crural phlebitis, though I was at first inclined to ascribe it to inflammation of the areolar tissue, and this view was rendered probable by its terminating in two instances in diffuse suppuration; but as there has been no opportunity of examining the condition of the limb after death, this point is undetermined. It generally yields to the application of a few leeches to the groin and warm fomentations. The horizontal posture should be enjoined so long as the swelling continues. In the chronic stage, a well-applied bandage from the toes upwards is useful.

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* Medical Times and Gazette, 1853.

Gangrene of the extremities.—In malignant typhus, one of the most formidable sequelæ is gangrene of the lower extremities. It is of rare occurrence—at all events in the wards of the Fever Hospital. I have seen one or several toes, or a part of the foot, or even the lower third of the leg, become suddenly livid, and pass rapidly into gangrene. The gangrene is generally preceded by acute pain in the part, and on examination the integuments are of a dusky-red or pale purple color, and sometimes covered with vesications containing dark serous fluid. In some instances, there is no pain, and the first indication is given by the livid or almost black hue of the part which is generally cold and without the slightest sensibility. It is said that gangrene may attack the upper extremities, but this I have never observed.

The immediate cause of the gangrene is doubtless some interruption to the circulation, either from the heart being so feeble that it is unable to propel the blood to the extreme parts, or from mechanical obstruction in the circulation of the affected limb.

The indications of treatment are, to limit the extent of the gangrene, and to aid the natural efforts in the separation of the mortified parts. Presuming that the gangrene depends on an imperfect supply of blood in the part from either of the causes stated, we are to endeavor to stimulate the general and local circulation. The former is best effected by administering powerful stimulants internally—wine, brandy, ammonia, chloric ether; while the latter object is promoted by enveloping the affected parts in cotton wool, steeped in port wine or camphorated spirit of wine, and preventing evaporation by oil-silk. These applications are to be frequently renewed. When the gangrened parts show a tendency to separate, indicated by the formation of a line of demarcation, the parts should be enveloped in a warm poultice, sprinkled with camphorated spirit of wine, and renewed every few hours. In all cases of this kind, opium should be given in doses of half a grain, or a quarter of a grain of morphia, every six hours, or more frequently if there be great pain and nervous exhaustion, withdrawing the remedy or giving it only occasionally when the nervous system is tranquilized.

Bed-sores are a very troublesome and sometimes dangerous result of low fevers. They generally interfere materially with the convalescence, from the drain on the patient's strength, by profuse suppuration and consequent irritative fever. I have known them to be even the immediate cause of death. Though they seldom appear till the middle or latter stage of the fever, in corpulent subjects, or in cases in which from the prostration the patient is unable to change his posture, the parts which are subjected to pressure may give way at an earlier period. Bed-sores may form on the sacrum, trochanters, knees, ankles, or elbows, and even on the ears, scapulæ, or angles of the ribs. The skin covering those parts first inflames, vesication or detachment of the cuticle succeeds, the cutis loses its vitality, and an eschar or superficial cutaneous gangrene of varying extent forms, and becomes slowly detached from the surrounding portion of healthy skin, leaving a more or less deep excavated ulcer of unhealthy aspect, and sometimes exposing a portion of carious bone.

In the treatment of bed-sores, a point of importance is, that with the object of removing pressure from the inflamed or ulcerated parts, the posture should be frequently changed. Great relief is often afforded by keeping the patient on his face, but better by placing him on the water-bed invented by Dr. Arnott, which is indeed indispensable in the management of bed-sores. I have seen an extensive inflammation of the sacrum, which would have probably soon ended in sloughing, disappear after the invalid was placed on the water-bed, which has superseded many inventions having the same object in view—removal of pressure.

If there be merely erythematous inflammation of the skin, the inflamed surface may be brushed over with collodion, either alone, or mixed with castor oil or cod liver oil in equal proportions, or with a solution of bichloride of mercury in proof spirit, in the proportion of two grains to the ounce. I have also seen in the early stage good effects from a popular remedy—a solution of alum in any weak spirit; but still better results from a solution of nitrate of silver (ten grains to the ounce), or should a solution not be at hand, the parts may be penciled with solid nitrate of silver. If these local measures fail in preventing the destruction of the skin and subjacent cellular tissue, the separation of the mortified skin should be promoted by poultices, composed of bread and water, boiled carrots, or linseed, sprinkled with peat charcoal, and renewed three or four times a day; or what seems to answer well, by pledgets of lint soaked in warm water, and covered with oiled silk, which may be continued after the eschar has separated. If the ulceration look pale and unhealthy, it will be necessary to use a gently-stimulating application. It may be dressed with any of the balsamic preparations, such as Peruvian balsam and castor oil, in the proportion of one of the former to two of the latter, applied on pledgets of lint. Another plan is to apply the warm-water dressing, and, in addition, to wash the bed-sore night and morning with a solution of chloride of sodium, in the proportion of twenty to thirty drops of the concentrated solution to an ounce of water, or with a weak solution of chloride of zinc. Some prefer the nitric acid lotion (made by adding two drops of the concentrated acid to a pint of water), or the common black wash; others, a weak solution of the nitrate of silver (five grains to the ounce), once a day, the sore being afterwards covered with carded cotton-wool and oiled silk. If there be great pain in the sores, the solution of morphia may be added to any of the applications preferred, as well as given internally.

The tannate of lead has been strongly recommended by Mr. Autenreith, of Vienna, as an excellent application to bed-sores. It is made by boiling an ounce of oak bark in eight ounces of water, and adding a solution of the diacetate of lead, (liq. plumbi diacet.) The precipitate (tannate of lead) is collected on a filter, and, after being washed, is applied to the bed-sores, which are afterwards to be covered with a poultice. This dressing is to be renewed night and morning. It may also be used in the form of ointment (equal parts of the tannate of lead and axunge) spread on lint, the sores being afterwards covered with cotton wool and oiled silk.

The cod-liver oil has also been proposed as an application to extensive bed-sores with caries of bones. Lint soaked in this oil is to be laid over the ulcer, and renewed night and morning.

If, in the process of healing, the granulations become exuberant, they may be touched with a concentrated solution of sulphate of copper.

PARISIAN MEDICAL INTELLIGENCE.

(FROM OUR SPECIAL CORRESPONDENT.)

At the Imperial Academy of Medicine on the 24th ult., M. Malgaigne ascended the tribune, and amid a profound silence delivered the most eloquent address I ever had the good fortune to hear within the walls of the Academy. In spite of a disagreeable southern accent, a nasal tone, and a total lack of "presence," M. Malgaigne's charm and power as an orator are undeniable. His wit, quickness of perception, brilliant illustration, and happy citations, added to great rhetorical skill and knowledge of effect, make him a most potent advocate, or most formidable opponent, in any medical question. It is unfortunate, however, that none of these qualities can be conveyed in an epitomized *compte-rendu*, and your readers must be contented with the raw material, bereft of its fashioning, and consequently as much like the original as would be a heap of pulverized marble to the statue it may formerly have composed. M. Malgaigne began by rallying the head of the chemical school, M. Poggiale, on the subject of his antipathy to the word *chimiatre*. "Remain, then," said he, "in your chemical province, and be simply a chemist; but encroach one foot upon our domain of medicine, you will incur the penalty, and we shall ruthlessly brand you a *chimiatre*. Chemistry has done much for medicine; she has been a faithful handmaid, but like all handmaids must be taught her proper place, and be kept there: her powers are limited, and this she must not forget." M. Poggiale had expressed a hope that more ample justice would be rendered by the future to chemistry and her services to medical science than the present seemed inclined to accord. M. Malgaigne would remind the learned Professor that the future is often a more impartial judge than the present, and that although it often raises a throne for the great genius, yet as often does it dig the grave of the dreamer. M. Poggiale had boasted of the power possessed by chemistry of forming, by synthesis, one or more of the principles produced in the human body, and would thence, by analogy, argue that chemical agency is alone competent to the formation of the rest. "I grant you," continued M. Malgaigne, "that a few of the crystallizable products of the human laboratory may be mimicked by chemical aid, but there are other materials in the body besides chemical products, and when we come to the formation of tissue, more than crystallization is needed. We want for the organization of tissue, the touch of the weaver; we want the warp and woof. Can chemistry furnish these? No, she cannot, in spite of all the boastful encomiums of her devotees. There still is, and ever will be, between the operations of nature and those of chemistry an unfathomable gulf which no effort of man will ever succeed in sounding. The chemists generally are too fond of calculation, and too little of experiment, and from this fault even M. Lavoisier was not free. Take their many years of fruitless search after the source of animal heat as an illustration. In this they remind me forcibly of the story told of the hydrographers of Frederick the Great, who, when consulted by his Majesty on the subject of a well he wished to sink at Sans Souci, and requested to point out a likely spot for the finding of a spring, fell to calculating. They took into account the nature of the soil, and its geological conformation; the possible interference of chance disarrangements, and all the other contingencies, from the probable to the impossible, were allowed for, the calculations were made, and a site was indicated. A pit was dug, and no water was found. Fresh calculations, and similar results. At last Frederick, a positive man, got tired of the philosophers, and sent for a little pump-maker in the adjoining village. The illiterate fool, with no knowledge of geology, mathematics, or the doctrine of chances, pointed out a spot; a well was sunk, and water obtained in abundance. M. Malgaigne seemed to wish that modern chemists had a little more of the pump-maker in them than they have. "M. Poggiale does not admit the existence of a vital force in the economy; and yet he speaks of life and its presidence over the functions. This surely was more than a half-vitalist admission." M. Malgaigne then reverted to the works of one of the leading organicians of the day, M. Rostan. "Here," he observed, "the theory of vital property is rejected, and the doctrinal datum of organs endowed with 'disposition to function' maintained; a healthy organ implying a healthy function, an unhealthy organ a deranged function. How does this theory explain death when no change of structure, no organic lesion can be detected; or how, that of two grains of wheat taken from a mummy-case, neither distinguishable from the other in appearance or structure, both organically the same when planted, one will die and the other grow and fructify. Thanks to the organicians and their infamous treatment of pneumonia by bleeding and leeching—thanks to their sacrifice of human life thereby, we have seen the day when the statistics of homœopathy have been laid by the side of our own, and the results have not been what they had a right to be."

"It is a falsehood!" roars out M. Barth, of Beaujon Hospital, "and the statistics were untrue."

"So I trusted, and so I believe," went on M. Malgaigne, "but the insult has been offered to the profession through you, and the credulous, unenlightened section of the public does not stay to sift facts; and the report, untrue as it is, will have already borne its fruits. The vitalists, on the other hand, cure pneumonia perfectly well without bleeding, and lose an infinitely smaller proportion of cases."

An interruption by M. Bouillaud—"That is inexact; and were you attacked to-day with severe pneumonia, and not bled, I think we should not have the pleasure of hearing you speak again in the Academy."

"That I should be sorry for myself also," replied the orator; "nevertheless I have not always been of the same opinion regarding bloodletting. In my days I have bled, cupped, and leeched with the best of my contemporaries. I began as Broussais' *chef de clinique*, I continued the system through part of my hospital career; but I am proud to say I know better now. I have hardly used even leeches for the last six years, and I am well satisfied with my change of opinion. I believe that your organicism, carried to the bedside, blinds the physician, making him neglect the more important general indications in order to attend to the more trifling local manifestation."

After citing two cases illustrative of the superior value of the general vital indications over the local organic condition in the formation of a prognosis, M. Malgaigne terminated his brilliant speech by a short consideration of the character of vital force. "Its alliance," he said, "with caloric and electricity is indisputable. It is, like them, a special agent, possessing both affinity and attraction for matter, but independent of it and separable from it; the dead body differing from the living man as the uncharged Leyden jar differs from the charged one."

The meeting broke up considerably later than usual. There will probably be no discussion next week, as a new member is to be elected, and this ceremony is performed with closed doors.

A Russian, of the name of Lukomski, some months ago requested permission of the head surgeons of the two great venereal hospitals here, the Midi and Lourcine, to continue in their wards a method of treatment which he declared had succeeded in Russia, and especially in an hospital at Simpheropol, where he had been allowed to experiment. The plan was based on the hypothesis of the incompatibility in the system of the venereal and vaccine virus, and the primary object of the treatment was stated to be the accumulation of the latter in the blood—this to be effected by repeated vaccinations, to the extent of nine or ten consecutively. A committee, consisting of MM. Cullerier, Folin, and Alphonse Guérin, was named some weeks back by the Society of Surgery, for the purpose of examining the results obtained, and the report was presented on Wednesday last. I am informed by the reporter, M. Guérin, in whose wards at the Lourcine part of this investigation was conducted, that the failure of M. Lukomski's experiments has been complete, and that the "anti-syphilitic power of vaccine" has been proved to be a myth. The idea is not a new one, and was, years ago, worked threadbare by Sigmond, in Germany.

Paris, August 6th, 1860.

Erysipelas has been raging in the central Paris hospitals for some weeks past, and at the Clinique more especially. At this latter nearly all the operations have been followed by this most distressing complication, and M. Nelaton has deemed it prudent to postpone treatment in several cases in consequence. The Hôpital Beaujon and the Lariboisière enjoy a perfect immunity from this scourge, thanks, no doubt, to their excellent hygienic arrangements, airy situation, and more spacious distribution. I believe we shall some day find out the mistake of planting great depôts for the sick in the centre of our cities, and, reversing the plan of centralization, retain simply receiving houses in town for the registration of patients, who will immediately, as on the field of battle, be conveyed by a sort of civil ambulance corps to the destined hospital, itself placed in the most healthy situation procurable, and at easy railway distance.

Taken by themselves, the Clinique, the Charité, and even the Hôtel Dieu, are hospitals of which a casual observer would augur favorably. The buildings are large, almost *grandiose*; the wards are lofty, well-lighted, and scrupulously clean: the first two institutions have gardens full of green trees and flowers, and a far greater air of comfort than is usually seen in such establishments elsewhere, and yet they are rarely free from some one or other of the manifestations of atmospheric impurity. Why is this? In the case of the Clinique the question is not difficult to answer. The hospital though it has an open square of about an acre in extent within its walls, is yet built in with old houses, the veteran architecture of the classic "quartier Latin." One end of the building juts into the Court of the Ecole Pratique, the dissecting school of the Faculty of Medicine; and the opposite side, as the ground rises towards the Rue de Monsieur, is much below the street level, and receives, no doubt, a due contribution from the house-drains of that thoroughfare. The Charité stands in the damp soil of the Pré aux Clercs, the old Battersea-fields of Paris, in which so many duels were fought in days of yore. The Hôtel Dieu is as old as the hills, and never was regularly built, but, like Paddy's shoes, "only patched;" the ventilation is very ill contrived, and it overlooks the Seine, a river bidding fair some day to rival, in its powers of evolving ammoniacal and sulphureous perfumes, the great model, Father Thames. I know that many will think I am exaggerating; to such I say "Come and smell for yourselves."

A work, entitled "Les Cures de Petit Lait et de Raisin," from the pen of Dr. Edward Carrière, has just appeared in Paris, and has been courteously received by some of the medical reviews. A full-sized octavo volume is devoted to a pæan in praise of the healing virtues of milk-whey and the juice of the grape (unfermented, be it understood). It appears from this book that Germany and Switzerland alone rejoice in the possession of several hundreds of establishments, where health and whey, salubrity and grape-juice, are dispensed with a lavish and ungrudging hand. The two panaceas are apparently all powerful, and universal in their adaptations. The over-fed gourmand, oppressed with fat, and the emaciated victim of tuberculosis, are both equally benefited by a course of these much vaunted remedies. As the culture of the vine in England is a very artificial process, and as grapes hardly ever ripen in our foggy climate without the assistance of a greater or less degree of forcing, it may be difficult to establish a comparison in this particular respect; but surely, unless indeed M. Carrière's partiality for the Teutonic cow and its Helvetian sister has led him into exaggeration, that animal must be endowed with some special quality denied to the less fortunate bovine, or rather vaccine, race in our island. Or is it that milk-whey in the Swiss mountain districts and grapes from "the vine-terraced hills of the Rhine" are possessed of properties as wonderful as that lately attributed at Geneva by M. Rilliet to iodine—a special *ism* resulting from their prolonged use? The Academy of Medicine pondered over these wonderful cases of iodism for several weeks with an air of stupefaction and astonishment, (analogous to that of a child reading the "Adventures of Baron Munchausen,") and returned the cautious verdict of "curious if true." Some such kindred feeling it was, I confess, that took possession of my mind during the perusal of this carefully written and perfectly readable book of M. Carrière. It is very evident that the author, in extolling the merits of his therapeutical hobbies, and in attributing to their exclusive agency the numberless cures referred to, has forgotten to take into account the pure air of the mountains, the regular habits, the wholesome diet, the bodily exercise, and mental relaxation or distraction, which, though apparently, and according to his showing, only accessories, are in reality the essential conditions of the benefits accruing from the salutary *régime* he has treated of in his work.

M. Beau gave a clinical lecture at the Charité on Saturday, the 4th inst, the subject treated of being the rare occurrence of phthisis in hysterical subjects. The cases which suggested his remarks were those of two females of middle age, at the present moment under treatment in his wards, both presenting the symptoms of the suppurative stage of consumption, and both having within a very recent period manifested unequivocal indications of hysteria. The coincidence of the two affections, he said, was rare—so rare, indeed, as to have led to the belief that the presence of the latter exercised a protective influence in the constitution antagonistic to the development of tubercle. The same immunity from phthisis had been observed in persons suffering from asthma and emphysema of the lungs. But this, also, was a general and not an invariable rule; and M. Beau expressed himself as confident that neither of these morbid conditions could be considered as incompatible with the tubercular diathesis; their coexistence was the exception, and not the rule, but quite sufficed to prove that hysteria possessed no power in preserving the patient from phthisis. M. Beau, in concluding, dwelt at length upon a symptom of phthisis which is hardly mentioned by any author on the subject, and yet an almost constant accompaniment of the malady in its progress. This is a pain felt on pressure in the popliteal region, or on the sides of the thigh, a little above the knee. It is fully as constant as the premonitory headache, so often amongst the earlier signs the only prominent one, and more reliable. This pain he terms "melosalgia."

M. Trousseau is fond of ordering, in chronic bronchitis with difficulty of expectoration, the inhalation of the fumes of arsenious acid by means of cigarettes, each charged with one-fifth of a grain of the drug, and three or four of them to be used during the day, the patient being recommended to inspire the smoke as deeply as possible. This plan I have seen followed by much temporary relief to the sensations of the sufferer, although I cannot speak much as to ultimate benefit.

Spontaneous cure of Exophthalmos.—A lad aged seven, of weakly appearance and manifest scrofulous constitution, attended at M. Desmarres' dispensary for a period of three months during the early part of this year; he was suffering from ptosis of the right upper eyelid, and underwent a mixed treatment of local stimulation, combined with the internal administration of antiscorbutics. Whilst the condition of the eyelid remained the same, an additional symptom appeared which lent increased gravity to the case: this was that gradual protrusion of the globe of the eye commonly termed exophthalmos; progressive dimness of vision and increase of pain accompanied and kept pace with the increasing deformity. Pressure on the bulging organ did not augment the pain, but presented to the touch a feeling of resistance as from a dense mass behind the globe, totally unlike the usual sensation of elasticity afforded by pressure exercised on the healthy eye. The presence of a tumour at the back of the orbit was diagnosed by M. Desmarres: as to the nature of the tumour, however, it was impossible even to hazard a surmise. No alteration had taken place in the child's general health. As regarded the eye itself, neither superficial nor ophthalmoscopic examination revealed anything; for, beyond slight choroidal congestion, and some limitation in the ocular movement, no organic alteration could be discovered. Iodide of potassium internally, and iodide of lead externally, in ointment, were prescribed; and it was anticipated that ere long surgical interference would be necessary. The case was shown to M. Velpeau; he concurred in the diagnosis, and recommended a similar treatment. This brings my story down to the middle of June, at which time the lad left Paris for the country. The deformity was then shocking to behold, and the pain suffered at times very agonizing. On his arrival in the country, he catches the measles; a chill during the early period of the fever is followed by suppression of the eruption and a violent attack of pneumonia; this latter degenerates into phthisis, waking up no doubt some quiescent deposit of tubercle. The parents, alarmed, hastily return with the child to Paris; and a few days since, to my astonishment, I saw the little patient walk into my consulting-room, looking pale and emaciated it is true, and with a still suppurating cavity in the apex of the right lung, but perfectly cured of his exophthalmos. His mother tells me that from the second day of the fever the eye began to recede, and that its restoration to the normal state has since been progressive and uninterrupted. How this happy result has been brought about cannot, I think, be doubted. To attribute to the effects of a treatment, which had been discontinued before the improvement commenced, a sort of posthumous action would, I think, be to deal unfairly by the all-powerful *vis medicatrix naturæ*. It is not probable that the newly-formed deposit constituting the intra-orbital tumour, whether cyst, subperiosteal effusion, or of whatever nature, was exposed to the same process of rapid elimination by absorption as are the normal tissues of the body during the febrile excitement? I have very good hopes of the boy's recovery from his present attack, and consequently the case, if the exophthalmos be not reproduced, will be most satisfactory. Had the child passed from M. Desmarres' hand into those of a quack, and then caught the measles, the cure would no doubt have been made the basis of a reputation such as that of M. Vries, founded on the cure of M. Sax's fungoid cancer.

Paris, August 13th, 1860.

Academy of Sciences.—At a meeting of this Academy on the 6th instant, an essay by M. Fasoli, on the Employment of the Sulphuret and Sesquioxide of Iron as Antidotes in Cases of Poisoning by Arsenious Acid, was read. Nineteen dogs, it appeared by this paper, were experimented on and dosed with arsenic; to five out of the number no counter-poison was administered—they were left to their fate, and all died; out of the fourteen others, to whom considerable doses of hydrated sesquioxide and sulphuret of iron were given, only two died—a result which powerfully upholds the already good reputation enjoyed by these two salts as arsenical counter-agents.

At the same meeting some researches made by M. de Luca, of Pisa, on the *vexata questio* of the existence or non-existence of atmospheric iodine, were brought forward. From what I could gather, M. de Luca's experiments seem all to negative the existence of this principle in the air. This will be a great blow to the theories of the Genevese philosophers and their atmospheric iodism.

Academy of Medicine.—The business of this body opened on the 7th instant by the reading, *en comité sécret*, of M. Nélaton's report of the relative claims of the six candidates for the vacant chair in the section of Surgical Pathology. After some deliberation, the following order of classification was adopted:—1st M. Gosselin; 2nd, MM. Broca and Richet (*ex æquo*); 3rd, M. Morel-Lavallée; 4th, M. Folin and Giraldés (*ex æquo*). The successful candidate, M. Gosselin, was for some years surgeon to the Hôpital de Lourcine (the female venereal hospital), and has published some important remarks on Stricture of the Rectum. He is at present attached to Beaujon, and is essentially a practical man.

This ceremony over, the public was readmitted, and the discussion on the Perchloride of Iron resumed.

M. Devergie again addressed the Academy, and urged very strongly upon his hearers some of the facts which are daily occurring to prove the efficacy of this preparation in the treatment of purpura hæmorrhagica, reports of eleven well-authenticated cures by the perchloride in very severe types of this disease having been received by the Academy since the discussion commenced; which fact alone the speaker considered as condemnatory of M. Trousseau's contemptuous rejection of this remedial agent, which it will be remembered that he qualified as the least beneficial, when administered internally, of all the salts of iron,—threatening those who should adopt its employment with an *avenir de déceptions*. M. Devergie again reverted to the experiment quoted from M. Claude Bernard, proving that carbonate of soda, when introduced into a dog's stomach through a fistulous opening, will render the secretion more acid than before, instead of neutralizing this reaction; and also that this secretion of acid increases in proportion to the amount of alkali introduced. "It is curious," said he, "that both MM. Trousseau and Poggiale, in their several speeches, should have used the very same weapons for attacking each other; and I dare say it will be found still more curious that I should take up the same arms to assail them both. I refer to the cure of acid dyspepsia by alkalies, and the abduction of M. Claude Bernard's experiment by M. Trousseau in support of his own views I believe that this gentleman has misapprehended the effects of carbonate of soda when used, as by M. Bernard, in concentrated solution upon the mucous coat of the stomach. He forgets that a small portion only of the alkali is neutralized by the acid actually present in the stomach, and that the rest, during the interval preceding the moment when saturation is effected, acts as a direct irritant, and provokes the increase of secretion, which irritant action, and consequent outpouring of secretion, can be repeated and reproduced as often as the operator desires. But to compare such a process to our treatment of acid dyspepsia is to establish a very false analogy, one of the main conditions of that treatment being, if we desire to ensure success, the copious dilution of the remedial agent—as in Vichy water, for example, and in the artificial preparations of the same nature. Neither can I admit, with M. Poggiale, that in acid dyspepsia the curative action of alkalies on the malady is one of a purely chemical nature; my own opinion being, that such remedies operate in the same way that absorbents act in certain cutaneous affections—that is, by removing or nullifying and rendering inert a product of morbid secretion, the presence of which was detrimental to healthy action; and the obstacle thus removed, nature is able again to take the reins into her own hands." In terminating, M. Devergie requested a vote on the adoption of the conclusions of his report; this was agreed to, and the conclusions were carried. Consequently, the perchloride of iron, in spite of M. Trousseau's very powerful opposition, may be said to have achieved a great victory, and to have taken a high place amongst the quasi-specifics of the Pharmacopœia. The discussion, however, is not ended, as M. Piorry has given notice of his intention to speak next Tuesday in answer to M. Malgaigne.

Functional Spasm.—M. Duchenne (de Boulogne), well known by his indefatigable researches on the subject of nervous disorders, has lately described, under the double name of *functional spasm and functional muscular paralysis*, an affection, which though often noticed in a vague way by most clinical observers, had never been seriously studied by pathologists. The conditions which are implied in the name of this disorder are not permanent, or at all events are not permanently prominent, requiring for their reproduction or manifestation the exercise of some special function, of which they then impede the progress. The commonest form of this affection is that called the "scrivener's cramp," and the seat of the spasm or paralysis is in one or more of the fingers, which either curl up, or may become so powerless as to cause the writer to drop his pen—this condition being often observable after a few strokes of this implement, and consequently wholly unconnected with fatigue or nervous sur-excitation. Other muscles besides those of the hand and arm are also found to be liable to this affection—e. g., the sterno mastoids, the abdominal muscles, and also those of the shoulder. It is, according to M. Duchenne's observation and experience, generally incurable, and out of 35 cases treated by cutaneous Faradization, only 2 were benefited, and no amelioration whatever was noticed in the remaining 33.

The daily advertisement in *Galignani's Messenger* of a work by Dr. Churchill, "On the Prevention of Consumption by the Use of the Hypophosphites," induced me to suppose that an emended edition of his pamphlet of 1859 had probably been thought necessary since the publication of certain cases in THE LANCET. I was, however, disappointed; for, on referring to the book, I find the same date on the title page, and the same imperfect narration of the Brompton Hospital experiments at page 9 as before. the period of trial accorded to the hypophosphites being here stated to have been limited to *one fortnight only*. I think Dr. Churchill will see that it is hardly fair to the public, to whom he has appealed, to keep back from them one item of evidence, likely to affect, whether one way or the other, the cause he has undertaken to plead before them. Had I not been a reader of THE LANCET, I should certainly have concluded, from the tenor of this pamphlet, that Dr. Churchill had been most abominably treated by the Brompton Hospital staff

I conclude with a little anecdote for your botanical readers. Great excitement prevailed last week in the *quartier* of the Bourse, in consequence of the sudden appearance of a small mound in the pavement. A little hillock was seen to be slowly rising up on the well-trodden pathway; some unseen power was uplifting the solid crust of asphalt. Many were the conjectures as to the possible cause of this mysterious event. Was a volcano about to burst forth under the windows of the Tribunal of Commerce, as in the sixteenth century did the Monte Nuovo on the shores of Baiæ? or was the fair face of Paris attacked by a furuncular eruption? or (prosaic suggestion!) was some tardy mole dormant since the days of the Emperor Julian working its way to the surface of his quondam cabbage garden? Curiosity was at its acme of intensity, when the parturient mountain burst and exposed to view—a mouse? No; a gigantic fungus simply! which, in its gradual development, spurning such paltry obstacles as bitumen and paving stones, had pushed the world before it, and thus forced itself on the notice of the Bourse speculators of the day. The big *mushroom* had well chosen the scene for its *début*.

Paris, August 20th, 1860.

At the last sitting of the Academy of Sciences some experiments by M. Matteucci on the electro-motor power of the electrical organ of the torpedo were communicated. This not being a subject directly bearing on medical science, I shall confine myself to a simple recital of the deductions drawn by this learned physiologist. The first is, that the electro-motor power of the torpedo exists independently of the immediate influence of the nervous system, and that even eight days after death this power may still be found to prevail, long after all traces of nervous excitability or muscular irritability have ceased. The second, that the electro-motor power of the organ is augmented by the excitement of its action, and that this increase of power persists for a certain space of time. The third and last point is, that whilst muscular function is accompanied by appreciable chemical changes, and most notably by the development of heat, such is not the case with the organ of the torpedo, the exercise of which is unattended by any such apparent physical manifestation.

At the same meeting, M. Bourguet presented a paper on the reparation of long bones, as occurring after extensive resections of their shafts. This essay, which possesses considerable merit, and the materials of which are drawn from the inexhaustible mine of clinical observation, tends to establish the following:—The new bone formed after removal of part of the shaft of a long bone is shorter and thicker than the old. The presence of the periosteum in its integrity is *desirable*, but *not indispensable* to the reproduction of osseous tissues: as the surrounding textures, such as vessels, muscles, fibrous and areolar tissues, are sufficient of themselves, in the absence of the periosteum, to do the work of regeneration. This last conclusion, is, so far as I know a new view of things, and will require further confirmation before it can be accepted.

At the Academy of Medicine on Thursday, the nomination of M. Gosselin was confirmed by ballot, he obtaining 47 votes out of 61. The hour which remained after the ceremony of election was monopolized by M. Piorry, who wound up the discussion on the action of perchloride of iron by a *dernier mot* in answer to M. Malgaigne. This *dernier mot* comprised a recapitulation of his former speech, the only change being its direction; it was addressed to M. Malgaigne instead of to M. Trousseau; and I spare your readers the recapitulation of a subject now so trite, and dry enough when new.

Two months of academical time have now been occupied in the consideration of a question which never could be settled by any amount of rhetorical squabbling. Not a single new fact has been contributed to science by the discussion (for the real text was utterly lost sight of from the first); not a single conviction has been implanted or prejudice shaken in the minds of any; and the result of this war of words has been *vox et prœterea nihil*—possibly also a little leaven of bitterness recalled into activity *de part et d'autre;* and that is all. General Bosquet is said to have exclaimed, on the occasion of the celebrated Balaclava charge, "C'est très beau, mais ce n'est pas la guerre." I feel inclined to return the compliment for the benefit of the Academy, "It is all very fine, but this is not science."

I notice the *Gazette des Hôpitaux* replies with a *tu quoque* retort to my strictures on the general character of the hospital practice now in vogue at Paris. The "look at home' defence to a charge is a very weak one; and, besides this, the London practice needs no apology or justification from me. But let me inform this journal of a fact which it seems to ignore, and this is, that there exists in medicine as in religion, an atheism—an absence of conviction—an unsteadfastness of creed—full as dangerous in its influences as is socialism in the political sphere; and that this absence of definite principle—this recklessness—is engendered by the very capricious and experimental style of treatment to which I referred in my letter. Let me give you a little sketch of his own *confrérie*, traced by a French physician, one of the notabilities of the present day. I own that it is somewhat overdrawn; but though a caricature, it is still very like. An hospital physician, says my friend, goes through three phases of conviction. He enters the career at thirty, let us suppose; he is then full of hope, places the most sanguine reliance in the omnipotence of the materia medica, has at his fingers' ends, twenty remedies for each disease, has a counter-agent for each symptom, and passes fifteen years of his life in trying a legion of drugs with more or less success or disgust. In the second stage, at forty-five, on returning to him again, we find a sadder, but a wiser, man; he has no longer the same indiscriminating confidence in the power of drugs; he has had many disappointments; his praises of the Pharmacopœia have gradually grown fainter and fainter; and he has discarded all his imaginary specifics. Two or three medicines, however, have proved less faithless than the rest, and these he uses *à tout propo*,—adding, in his moments of conviviality, that "these are his sheet-anchors, and for all the rest he does not care a ...... fig." At length our friend attains the age of sixty; his head is wonderfully clear, and between his intellect and his experience he ought to be an excellent therapeutist, and render valuable service to the cause of humanity. How now? Apathy, incredulity, *médecine expectante*, in place of energy, confidence, and vigorous treatment? Yes, so it is, alas!—the career, begun with hope and vigor, terminates in discouragement and inaction! Now I do not mean to give to the above a general application, but there is so much truth in the portrait that I have reproduced it for your contemplation. It is an omitted sheet of *Gavarni à Paris*.

The *Lombard Medical Gazette* reports the success obtained by a well-known practitioner—Dr. Gambarini, of Bologna, (lecturer on clinical surgery at the Hospital St. Ursula, in that city)—by means of injectious of diluted tincture of aloes in gonorrhœa. It is said to cure the discharge, even in the most refractory cases, more rapidly than the usually prescribed astringents. The formula recommended is:

as follows:—"R Tra. aloës, four drachms.; aquæ ad four ounces.: m. ft. lotio; ter in die injiciend." Some of your readers may possibly think this worth a trial in their practice.

An excellent *compte-rendù* appeared lately in the *Moniteur Scientifique*, due (as I understand) to M. Gratiolet, one of the curators of the Museum of the Jardin des Plantes, well known by his important work on the "Brain and Nervous System." This *rĕsumé* goes over all the evidence, experimental and rational, for and against the doctrine of spontaneous generation, primitive generation, heterogeny, or whatever it may be termed, revived since 1858 by Professor Pouchet, and communicated to the Academy in his note "On the Proto-organisms, both Vegetable and Animal, produced spontaneously in Artificial Air and in Oxygen Gas." Without passing a definite verdict, M. Gratiolet's mode of summing up the evidence would imply that he is himself in nowise a partizan of the opinions expressed by M. Pouchet; but still that he is desirous that the refutation of the doctrine should be arrived at by scientific research and experiment, and this, to use his own words, "in common, without passion or prejudice; and that, for once at least, the noble and touching example of Schröder van der Kolk and Vrolik should be imitated"—namely, that of two philosophers working out the truth or falsity of a question on which they differ in harmonious co-operation, each lending his light to the other, and receiving back assistance when needed. Whether, however, Messrs. Pouchet and Pasteur are likely to follow the suggestion does not at present appear. M. Pouchet's pretension of being able to invoke a special creative power by the mere juxtaposition of certain natural conditions seems, to say the least of it, somewhat presumptuous; and the seriousness with which his views are propounded only confirms the fact that science as well as history has its share in the domain of fable and romance, and that M. Pouchet's revelations are only a recent chapter of the philosophic *contes des fées*.

Paris. Aug. 27th, 1860.

Correspondence.

"Audi alteram partem."

IS THE HEART ORGANISED FOR PERFORMING OF ITS OWN ACT THE MOTION OF DIASTOLE AS WELL AS THAT OF SYSTOLE?

(LETTER FROM MR. J. MACLISE.)

To the Editor of THE LANCET.

SIR,—Having, in the communication lately addressed to you and your professional readers, stated some of the anatomical reasons which induce me to believe that the heart's pectoral throb is due solely to its diastolic or expanding motion, the above question next suggests itself to me, and this I have no hesitation in answering negatively, according to the structure and mechanism of the organ.

In interpreting the facts which I adduce as supportful of this opinion, I find myself, happily, under no necessity for disturbing the existing very rational, because demonstrable, ideas entertained respecting muscular action in general, whether of the voluntary or involuntary class of organs. We see that a muscle, when put in action, manifests a simultaneous contraction or shortening of its fibres between its points of origin and insertion; and that, on being extended, it relaxes, and is then wholly passive. To this rule, at least, there is no real exception; and hereupon we conclude that no *single* muscle or muscular viscus in the living body is or can be active in contrary directions for producing opposite conditions. Relaxation appears, in regard to contraction a negative condition, just as shadow is in regard to light. Though we give the names, flexor, extensor, levator, depressor, abductor, adductor, constrictor, dilator, &c. to different individual muscles, we know that these names have reference only to the part moved, for the several actions of these muscles are generically the same, being all contractile. When a part is capable of being moved in opposite directions, or set in opposite conditions, we find invariably that the muscular agents are placed in opposite pairs in reference to each other and to that part: the flexor contracts and acts on that bone in one direction; the extensor does the same to draw the bone in a contrary direction; and when the one is active, the other is passive or permissive. If the two muscles relax together, the bone lies quiescent; if the two contract, the bone becomes fixed; and if from between both we remove the bone, the result is similar to what occurs when we disconnect and remove the beam of a balance from its scales: the two muscles can no longer alternate in action, having lost their hold of the mediate member; and, now shrinking or contracting together, they become ever after incapable of extension. It is evident, therefore, that extension on the part of any *single* muscle is not effected by its own vital act: the motion does not obey volition, because the muscle is not organised for performing any motion but that which contraction effects; and that which is not possible for the voluntary muscle to do must be equally impossible with the involuntary. As extension and expansion are but different forms of the same kind of motion, I would apply the last observation to both, and add that neither motion can be performed by *one* muscle, unless by the contractile act of an antagonist.

Besides the antagonistic action of oppositely placed muscles being necessary for effecting contrary motions in a part, there is an anatomical condition no less required for the same, and one which invariably obtains: the opposing motor powers inserted into the part to be moved must have their origins in another fixed part. This is the relation between the members of the osseous and the muscular systems everywhere; and, on considering well that relation between those systems, I become struck with the conviction that herein alone exists a provision for effecting those motions. In the osseo-muscular thorax only do I recognise that mechanism which can effect expansion and contraction of enclosed space; and, on comparing the thorax as a motor organ for acting inspiratorily and expiratorily, with the heart as an organ supposed to be capable of acting diastolically as well as systolically, the difference between their respective mechanisms is sufficient to prove that the heart *per se* cannot dilate itself. The inspiratory diastole of the thorax can be effected by a certain class of muscles, because these having insertions externally in the costal walls take their origins from skeletal parts which do not enter into the composition of the thorax; but the diastole of the heart cannot be effected by the muscular parts of that organ, which they form by having origin and insertion in itself.

The heart, as a muscular recipient organ, is absolutely isolated from all others in the body which by structural connexion might be supposed to effect its diastole. In whatever manner we dissect it for displaying its muscular layers, the only action which we can reasonably conceive these to be capable of performing is that of contraction, and this results in systole by reason of the united efforts of all those layers or enclosing bands. In this respect the heart is circumstanced like all the hollow muscular-coated viscera. These, we know, can contract for expulsion of their contents, and we know, too, that as recipients they must expand; but still we do not require to recognise in their walls a muscular mechanism whereby dilatation is accomplished. It is true that their expansion is evidently effected in a different mode from the diastole of the heart, occurring suddenly and dynamically, as instanced in the pectoral throb; and hence we are naturally inclined to seek for the agency of this motion in the substance of the organ, but hitherto our search has been conducted in vain. However we reason (*à priori* or *à posteriori*) upon the phenomenon of diastolic motion, the cause lies unrevealed by the heart's structure, and must ever remain so; for, in fact, the organ is not empowered either by vital or physical component parts to accomplish it.

It is certain, nevertheless, that diastole, as an effect, must be attributed to some cause; and, pressed by this necessity, it has been assumed by some physiologists that the motion is due to an elastic structure pervading the substance of the heart; but such structure is not demonstrable. By others it is imagined, that while some of the muscular bands are the agents for systole, a different set are the agents for diastole; but this idea is clearly untenable, for not only are those bands not paired antagonistically, but they are all united and concerted for the same act—viz., systole, and for no other. The belief that the heart, as a whole, is capable of acting for diastole and systole by the *same* muscular fibres cannot be entertained for reasons above mentioned; and to suppose that the momentum of the venous current *à tergo* is that which distends the heart's cavities is to mistake the effect for the cause, as may be proved by the law in physics: when vacuum is attempted in the interior of a pump, the fluid rises and frustrates the realization of it; and, as the heart's diastole cannot be effected without threatening vacuum in its cavities, the venous blood must of necessity rise and enter the heart. This, therefore, must be regarded as one cause of motion in the blood; but what is the cause of diastole is still a mystery.

While all the hollow viscera appear organized for active contraction, their dilative increase of capacity is manifestly effected by extrinsic causes, and these are of different kinds, according to the functions which the organs respectively serve. Dilator muscles none of them exhibit. They passively receive their contents, and do not *take* them in the sense of *action*. The pharynx is distended by the aliment, and, contracting on this, passes it into the œsophagus, which tube is in turn similarly distended, and so on throughout the entire canal. The vermicular motion of the bowel is a manifestation of muscular contraction on the *passant* distending contents. The stomach, urinary bladder, and gall sac swell by, and according to, the quantity of their respective contained fluids. The uterus increases in capacity by development *pari passu* with that of the fœtus. In these instances, we feel satisfied in having referred effect to its only true causation; but not so in regard to the heart, for who will assert that the returning blood is the agent of that organ's diastolic motion, when it has still to be proved that the afflux to it is not actually the effect of that very motion, and just as the ingress of air into the lungs is the effect of thoracic diastole? The inspiratory muscles, acting on the mechanically constituted thorax, declare themselves to be the prime movers of inspiration. To what agency are we to attribute the heart's diastole, since the organ itself is vitally incapacitated for performing the motion which, as such, must be due to some force? To this inquiry the result of my own researches and reading enable me to propose unhesitatingly the following answer—viz., *the heart, as prime mover of circulation, is developed in diastole;* this is its physical set or state *ab initio;* and, as secondary to this state in developmental time and process, the organ becomes endowed with vital energy—with muscular, contractile, systolic power. The physical state or diastole is, throughout the term of life, intermittingly antagonized by the vital act or systole; and whereas the latter is egestive of the blood through the arterial channels, the former must of necessity be ingestive of the blood from the veins, according to the disposition of the cardiac valvular apparatus.

I would, then, Sir, submit it to you and the profession whether or not the anatomical facts and the physiological phenomena accord with these my ideas of the heart's actions and motions? I ask upon what direct evidence have inquirers, from the time of Harvey to that of Hunter and to the present day, agreed to believe that the heart's pectoral throb is systolic, and what are the facts which do not declare the contrary? Have physiologists and physicians been all this weary time but laboring to build the pyramidal theory invertedly? If this should one of these days prove to be the only result of their observations, and it will, then the followers of Laennec will have to read through the stethoscope a long recantation of what they imagine they hear by means of that instrument—"Qui enim vias naturæ noverit, is deviationes etiam facilius observabit."

I am, Sir, yours obediently,
JOSEPH MACLISE, F.R.C.S.

WHAT IS THE SIGNIFICATION OF THE HEART'S THROB?

(LETTER FROM DR. W. H. BROADBENT.)

To the Editor of THE LANCET.

SIR,—I venture to request some little space in your columns, for the purpose of controverting the arguments advanced by Mr. Maclise in support of his opinion that the heart's throb is diastolic, and to show that it can be, and is, systolic.

Taking his two propositions, I find the reasons adduced to prove the first, "the heart's throb cannot be systolic," to be—

1. The impossibility that the apex should strike against the left thoracic wall.
2. The fact that the beat of the heart and the pulsation in the distal arteries are not synchronous.

The apex may not strike against the parietes of the chest, and yet the impulse there felt may be systolic, as will be seen below; and synchronism between impulse and pulse is so far from being a necessary condition of the impulse's being systolic, that it would be incompatible with this fact. The arteries being elastic, pulsation in them at any distance from the heart must succeed systole, and, if impulse is systolic, impulse; and this succession can be traced from the heart along the arteries: the carotid pulse is just after the impulse, the radial pulse just behind the carotid.

The second position, that "the heart's throb can be caused by its diastolic motion," rests, in connexion with some *à priori* considerations, upon an experiment which shows that if the right ventricle be suddenly distended, an impulse can be perceived through the walls of the chest; but it is not explained by what force this distension, sudden and forcible as it must necessarily be, is to be produced; or, supposing it to be exerted by the "rising venous tide," how it is that the veins of the neck, which so readily show regurgitation from the right ventricle, do not also give some evidence of the tension they must suffer.

Numbers of facts (physiological and pathological) might be brought forward which this theory would utterly fail to account for; but a brief description of what is seen when the heart is exposed in vivisection will give it the most complete answer. And here I am compelled to say that I have observed facts the existence or occurrence of which Mr. Maclise denies by implication. I have seen blood flow "per saltum" from a divided artery while the heart has been beating under my eyes, and I have seen distinct and strong jets from the aorta after the heart had been detached and placed in water. The movement of the heart, therefore, under these circumstances, is *not* a mere spasm and relaxation without change in the capacity of its cavities; there is a real though imperfect diastole and systole, and conclusions as to the normal heart's action may safely be drawn from what is thus witnessed.

When the sternum and costal cartilages of a living animal are removed (artificial respiration being kept up by means of bellows), before the pericardium is opened, there may be observed a sudden bulging of the body of the ventricles, accompanied with a shortening, then a more gradual subsidence and elongation, of the heart in its containing sac. This is more distinctly seen when the pericardium is opened. During contraction, the apex is approximated to the base, so that the heart becomes more globular; at the same time it becomes more firm, and there is an evident bulging of the body of the ventricles, resulting from the shortening in their axis, and the contraction of their muscular fibres. It is this bulge, (the energy of which may be felt by placing the finger on the contracting heart,) and not the stroke of the apex, which gives the impulse felt externally. It is not supposed that the apex, or any other part of the ventricles, leaves the thoracic parietes and returns against them with a blow. During diastole, the heart lies along in the pericardium in contact with it at every point of its surface, and, where the pericardium is uncovered by lung, mediately in contact with the wall of the chest. The systolic impulse is caused by the rapid concentration of the muscular mass of the heart upon its base. There is no doubt that it is the right ventricle which is in contact with the side of the chest, and which communicates the impulse; but it is a part of it much nearer the apex than would be the case were the impulse diastolic, especially as there is a twisting motion from left to right during the heart's contraction, which brings the apex forwards. These observed movements, too, are in accordance with the known arrangement of the muscular fibres of the heart, the common centre or fulcrum of which is not the inter-ventricular septum, but the auriculo-ventricular septum and the roots of the great vessels.

Were there no possibility of direct observation, and were speculative deduction the only method by which the time and mode of the heart's impulse could be ascertained, the reasoning of Mr. Maclise might easily be refuted, and most of your readers would be able, at a minute's notice, to start unanswerable objections; while many have had the opportunity of watching the heart in action, and can bear testimony to the accuracy of the description I have given, so far as it goes; which description, I may say, is by no means my own in the sense of originality, but a mere record of personal observation according with the observation and interpretation of the great teachers of physiology.

I am, Sir, your obedient servant,
W. H. BROADBENT, M.B.

Upper Seymour street, Portman-square,

WHAT IS THE SIGNIFICATION OF THE HEART'S THROB?

(LETTER FROM DR. W. H. BROADBENT.)

To the Editor of THE LANCET.

SIR,—I find that Mr. Maclise has anticipated one of my objections to his theory, and has devoted a second long letter to an exposition, which I had shown to be lacking, of the cause of the rapid and forcible diastolic movement which he maintains to produce the heart's impulse. This cause he sees in the assumed fact that "the heart, as prime mover of circulation, is developed in diastole." I might ask for proof of the *fact*; for the researches which establish it are not yet made public, and it would seem no easy task to demonstrate that the heart, which from its earliest appearance is found rapidly alternating between systole and diastole, is developed in diastole. Admitting, however, that all this is accomplished, the mode of operation of the fact as cause is mysterious —to me, indeed, incomprehensible.

In this second letter it is shown that there exists no provision by muscular arrangement or elastic structure for effecting the dynamic dilatation of the heart's cavities; and it is not only admitted that the rush of blood into them is insufficient to account for their sudden expansion, but it is asserted that this very flow of blood towards them is a consequence of their dilatation. All the causes of motion, then, which we are accustomed to see in operation in the human frame—muscular action, elasticity, distension of hollow organs by substances entering them with a *vis à tergo*—being excluded, a new cause is assigned, "a physical set or state," which is every moment being disturbed, and a return to which necessitates the exercise of considerable force without any provision for its generation in the physical constitution or construction of the organ, or rather in opposition to all we know of its mechanism. It is only necessary to assume that the small intestine is developed in diastole, that diastole is its physical set or state, and we have an entirely new explanation of the passage of food along and the presence of gas in the bowels. The intestine dilates, and ingesta and gas must rush in to fill up the threatened vacuum.

There is a remarkable passage respecting the cause of motion of the blood in the veins which demands some notice, and which I must ask permission to quote. It runs as follows:—"To suppose that the momentum of the venous current *à tergo* is that which distends the heart's cavities, is to mistake the effect for the cause, as may be proved by the law in physics. When vacuum is attempted in the interior of a pump, the fluid rises and frustrates the realization of it; and as the heart's diastole cannot be effected without threatening vacuum in its cavities, the venous blood must of necessity rise and enter the heart. This, therefore, must be regarded as one of the causes of motion in the blood."

This reasoning presents an example of such glaring misapplication of physical laws, and such blindness to most obvious phenomena, as would shake one's faith in the most plausible theory propounded by its author. The thin-walled, compressible veins are compared with the rigid tube of a pump; and it is not seen that the atmospheric pressure which causes the ascent of the water in one would cause the other to collapse. *Vis à tergo* is denied to the current of blood in the veins, when the simple experiment of placing a ligature round the arm demonstrates it in the swelling superficial vessels, and a lancet plunged into one of them would show that it could produce a jet of one or two feet. It is possible, then, that physiologists who have not overlooked these facts have not been far wrong in their account of the heart's action, and that truth, in this instance, may be on the side of antiquity. Stethoscopists, too, may venture in the meantime to continue to interpret what they hear as has been their wont hitherto.

I have not attempted to give a complete account of the action of the heart. I have merely brought objections against Mr. Maclise's theory, and the arguments by which he supported it; and in so doing I have adduced facts which render that theory untenable, even if the associated theory of the cause of motion of venous blood (which has no necessary connexion with it) be abandoned.

I am, Sir, your obedient servant,
W. H. Broadbent, M.B.

Upper Seymour-street, Portman-square,
August, 1860.

MR. MACLISE ON THE ACTION OF THE HEART.

(NOTE FROM DR. CHARLES D. ARNOTT.)

To the Editor of The Lancet.

Sir,—The following paragraph of Mr. Maclise's letter, published in your last, requires further consideration:—

"To suppose that the momentum of the venous current *à tergo* is that which distends the heart's cavities is to mistake the effect for the cause, as may be proved by the law in physics: when vacuum is attempted in the interior of a pump, the fluid rises and frustrates the realization of it; and, as the heart's diastole cannot be effected without threatening vacuum in its cavities, the venous blood must of necessity rise and enter the heart. This, therefore, must be regarded as one cause of motion in the blood."

The omission of one important item for consideration invalidates the inference here arrived at:—"When vacuum is attempted in the interior of a pump, the fluid rises and frustrates the realization of it." But the pump must be connected, with the fluid to be raised, by an *unyielding* tube. Attach either of the venæ cavæ to the nozzle of a syringe, and then try the action of your pump; there will be no "rising of fluid" to "frustrate the realization" of your vacuum, but the sides of the collapsable tube will approximate and effectually prevent such action.

"Who will assert that the returning blood is the agent of the heart's diastolic motion, when it has still to be proved that the afflux to it is not actually the effect of that very motion, and just as the ingress of air into the lungs is the effect of thoracic diastole?"

This instance of imperfect analogy may be cited as fully confirmatory of the fact stated, that the suction power of a pump must be nullified if attached to a collapsable tube. Had not nature very wisely provided, in the unyielding trachea, a conduit suited to this action in the mechanism of respiration, the same thing would inevitably obtain

My esteemed friend, Professor Allen Thompson, has so fully and ably investigated this subject as to leave scarcely anything for the reasonable mind to doubt respecting it.*

I am, Sir, yours obediently,
Charles D. Arnott, M.D.

Gorleston, Great Yarmouth, Aug. 1860.

CAN A WOMAN REMAIN IGNORANT OF HER PREGNANCY UP TO THE TIME OF HER DELIVERY?

To the Editor of The Lancet.

Sir,—In the year 1852, I attended a young married woman, aged nineteen, and delivered her of her first child, under the following circumstances:—I was hurriedly sent for to visit her, it being supposed that she was laboring under inflammation of the bowels. On my arrival, I found her free from fever and all inflammatory symptoms; but I had not been long with her before she had a violent labour pain; another, and another followed. I examined her abdomen, which I found somewhat enlarged. I took her mother aside, and expressed my fears that the patient would miscarry. She smiled, and said she was sure her daughter was not pregnant at all. She had never had any symptom of it, had never felt any motion as of a child in the womb, and no preparations had been made or were making in the way of providing clothes for the infant. I administered an opiate with the view of preventing the miscarriage; but on my return, two hours afterwards, I found labour had progressed steadily, and she was soon delivered of an exceedingly small infant, apparently still born; but, by the use of the hot and cold bath alternately, I had the satisfaction of handing over to its unbelieving grandmother a living child, and I may add that it is now a strong, healthy boy, eight years old. This was certainly the smallest living infant I ever saw; it could not have been, from its appearance, more than six months and a half in utero.

On cross-examining the mother of the child, she assured me she had not the most remote idea that she was pregnant, and had never felt any movement or other peculiar feeling in the abdomen. The enlargement of the belly (which was not very great) she had never paid any regard to. Having been very delicate before her marriage, her catamenia had been extremely irregular, so that no exact data could be obtained as to the duration of the uterine life of the infant. The patient moved in the middle ranks of life, and was in every respect thoroughly trustworthy, and, from what I know of her, I feel assured she would conceal nothing from me. Being a married woman, she had no reason to conceal anything, but, on the contrary, felt proud of her offspring. In further confirmation of the unexpected nature of the event, I may mention that as it happened on the 1st of April, considerable difficulty was experienced with some of her friends in convincing them of its truth.

This case then, I think, proves that a woman can remain in ignorance of her pregnancy up to the very time of her delivery, and is perhaps worthy of a place in your columns.

R. Scott Orr, M.D.,
Dispensary Physician to the Glasgow Royal Infirmary.

Glasgow, August, 1860.

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* See article Circulation—Cyclopædia of Anatomy and Physiology.

THE STATUE OF HUNTER.

To the Editor of THE LANCET.

SIR,—After the interment of the remains of John Hunter in Westminster Abbey, the lovers of science and the members of the medical profession were invited to subscribe for a statue of that distinguished man. In the advertisements soliciting subscriptions no mention was made of the site for the erection of this memorial. The subscribers have never been called together to determine this important matter; but a committee, self-elected, or appointed by a select few of the original subscribers, have taken upon themselves to decide that the statue shall be placed within the walls of the College of Surgeons. Had this been announced in the advertisements, I would not have been a contributor to the fund. The best memorial of Hunter in the College is his splendid museum, and, though the fine portrait of him by Reynolds is in decay, the busts by Flaxman and Chantrey well portray the lineaments of his features. In the belief that a statue of Hunter erected in some public place would extend the fame of this great man, and help to perpetuate the memory of one whose labors have conferred signal benefit on mankind, his admirers chiefly subscribed for the purpose. Many of them strongly disapprove of the proposed location of the statue, and as one of them I claim the right to a voice in the decision of this question. I write this in the faint hope that a public expression of dissatisfaction may induce the committee to pause, and to pay some deference to the wishes of the general contributors to the fund. F.R.S.

Athenæum, August, 1860.

SUCCESS OF THE MARSHALL HALL METHOD IN A CASE OF HANGING.

To the Editor of THE LANCET.

SIR,—The following case may, perhaps, be interesting to your readers as exemplifying the benefits of Marshall Hall's treatment in suspended animation:—

On Thursday, the 2nd inst., I was hastily summoned to a case of hanging in the county Gaol, at four A.M. I found the man lying upon a swing cot, with scarcely a particle of life left in him; his eyes were fixed and motionless, insensible to the touch; the respiration was scarcely perceptible; and the heart's action appeared confused and wavering. The left side of the body appeared paralysed; the arm and leg were inflexible and stiff; whilst, on the right side, the muscles were twitching and contracting, as if in death. The persons about all thought the case hopeless; and so did I. However, plenty of assistance being at hand, I wiped out the mouth, which was filled with bloody, frothy saliva, pressed down the tongue, and commenced rolling the patient from side to side most vigorously. For a long time not the slightest improvement took place. Now and then a grasp, as at first; then hope seemed to vanish. I put a lancet into his arm, and managed to get a little blood, dark, thick, and grumous: never allowing the body to rest, except for a moment, when the coma seemed to get more intense, and the muscular contraction more severe.

For two hours I plied my calling, ably assisted, I must say, and at last I had the satisfaction of seeing the patient evince a movement in the upper lid of the unparalysed side. Friction about the neck where the ligature had made a deep indentation, and also about the region of the heart, continued rotation in blankets, with now and then the inhalation of ammonia and ether, brought the patient around at eight A.M. During recovery, convulsion the most intense set in, and threatened to destroy life, after the comatose symptoms had begun to disappear. The result proved ultimately successful; and in the course of the day he walked from the cell to the infirmary, and partook of a broth meal.

This man was a most determined fellow. He had threatened over and over again to commit suicide, and two men slept in the cell with him to prevent the attempt. He however, at early dawn, got on a stool as if looking at the morning sun. The other prisoners saw him get up, but never suspected he had a handkerchief tied fast around his neck, which he hooked on to the window fastener. When one of the prisoners awoke, he saw the dark features of the man and the ligature, and so frightened was he that he had to call the warders to cut him down.

The case subsequently proved most interesting, as illustrating the success of the Marshall Hall treatment when, as in this case, it was speedily and promptly administered.

I am, Sir, your obedient servant,
ALFRED EBSWORTH, F.R.C.S.
Trinity-street, Southwark, Aug. 1860.

THE GRAPE-CURE AT VEVEY.

To the Editor of THE LANCET.

SIR,—In your remarks upon the above subject in THE LANCET nothing is said of the injurious effect which the continued grape-eating exerts upon the teeth. I have seen the enamel of the front incisors very greatly corroded in a patient of my own, who had spent some time at Vevey. This must be a serious objection to the unlimited use of a fruit which, taken in moderation, is so abundantly wholesome.

I am, Sir, yours respectfully,
SPENCER THOMSON, M.D.
Burton-on-Trent, Aug. 1860.

POST-PARTEM HÆMORRHAGE.

To the Editor of THE LANCET.

SIR,—In your last number,* Mr. Spender, of Bath, speaks of the good effect of iced water injected into the uterine cavity in uncontrollable post-partem hæmorrhage, as recommended by Dr. Tyler Smith. I will briefly narrate an instance confirmatory of the benefit of this description of treatment.

In the summer of 1843, during the time that I was acting as resident physician's-assistant in the Royal Infirmary of Edinburgh, a patient nearly at the full term of gestation was taken, though somewhat unexpectedly, in labour. The pains came on in the ordinary manner, the presentation was natural, and in the course of two or three hours the head was born. In a few minutes subsequent to the expulsion of the child a most frightful flooding set in! Without the loss of a moment I introduced my hand, took away the placenta, and endeavored to promote uterine contraction. Cold water was poured from a height upon, and external pressure applied to, the abdomen; but still the flooding continued, and I thought, despite of every effort, she would bleed to death. Recollecting there was ice in the hospital, it was readily procured. I took as large a piece as I could conveniently introduce, and placed it in the uterine cavity, and to the delight of all present it arrested the terrible current. When it had melted, another piece was introduced, and thus a coagulum was formed and contraction excited. She recovered slowly, but without an unfavorable symptom. It was unquestionable that the ice saved the poor woman's life.

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* Ante, p. 269.

I am, Sir, your obedient servant,
JOHN R. WARDELL, M.D.

Tunbridge Wells, 1860.

To the Editor of THE LANCET.

SIR,—The discussion of every-day sort of events is really, in my opinion, attended with much more benefit than that upon unusual and rare occurrences. It is a matter of much more moment to the general practitioner to be quite *au fait* in the passing of a catheter, or in opening the larynx or trachea *dexterously* on those emergencies requiring instant action, than to be well up from reading and seeing performed amputations at the hip-joint, or removal of the maxillary bone or bones. These remarks apply equally well to midwifery and its emergencies, which are behind none that the surgeon can meet with elsewhere either in frequency, danger, or in involving your character as a shrewd and successful practitioner.

What occurs more suddenly, with less forewarning, and what can be more dangerous, than post-partum hæmorrhage? The mother, relieved from pain; the practitioner, congratulating himself at the happy termination of perhaps a tedious labour, may probably be washing his hands preparatory to departure, when his practised ear detects a sound, that I always hear, under the circumstances, with horror,—*tic, tic*, a guttative, almost continuous splash,—the blood from the flooding woman falling in a small stream upon the floor.

Many are the plans suggested as the best means for removing this horrid danger. One gentleman, a man of note, has, I believe, used, and highly recommended, the administration of ipecacuanha, from its nauseating properties lessening the action of the heart, and thereby decreasing the flow of blood to the bleeding orifices. I think the danger that an already almost faint and exhausted person must be in from the exhibition of a powerful depressant, such as is this drug, has been too much overlooked.

However, the object of these remarks is to state my opinion and experience as to the *injection* of cold water into the uterine cavity. My opinion and practice are against it—the injection of water, but not against the introduction of ice; and therein lies a great and important distinction. I have long ceased to introduce my hand into the uterus, and knead its walls with my other hand upon the abdomen, because I thought, and had, indeed, observed, that contractions did not ensue any quicker or stronger than when I resorted to my present method. Moreover, any chance of coagulation assisting in sealing the vessels was thereby lost. And I am of opinion that the forcible injection of a continuous stream of cold water would, to a certainty, wash away all the coagulum, and open, any way for a time at least, the orifices of the vessels instead of closing them.

Dr. J. R. Wardell, (*vide* THE LANCET, after expiating upon the advantages and good effects of cold water uterine injection in hæmorrhage, does *not* use it. He introduces a lump of ice, properly and wisely, and the effect was good. But I think he will allow there is a difference, and a wide one, between introducing ice and washing out the urine cavity. There are some distinctions without a difference. This does not come within the category. I, like Dr. Wardell, never scruple at using ice, when it is to be procured; but I do object, upon theoretical and practical grounds, to anything like the *injection* of fluid into the uterus under these circumstances. I generally find that dashing water down upon the exposed abdomen, flapping it with cloths soaked in cold water, and kneading and manipulating externally (and using considerable force), will suffice to stay the hæmorrhage. I may add, that many such cases occur in my practice, and yet I have never had a fatal result.

I am, Sir, your obedient servant,
RICHARD MARLEY, M.R.C.S., &c.

Bromyard, 1860.

To the Editor of THE LANCET.

SIR,—In your journal of last week there is a paper on Post partum Hæmorrhage, by Mr. Richard Marley, of Bromyard; in which he states—"Many are the plans suggested as the best means for removing this horrid danger. One gentleman, a man of note, has, I believe, used and highly remmommended the administration of ipecacuanha, from its nauseating properties lessening the action of the heart, and thereby decreasing the flow of blood to the bleeding orifices. I think the danger that an already almost faint and exhausted person must be in from the exhibition of a powerful depressant, such as is this drug, has been too much overlooked."

From the above statement I am induced to think that Mr. Marley cannot be informed of what has been written on ipecacuhana in post-partum hæmorrhage. I have never read any author who has recommended ipecacuanha in nauseating doses to diminish post-partum hæmorrhage. I wrote a paper in THE LANCET of 1845, "On Ipecacuanha in *Emetic Doses*, as a powerful Restorative in some Case of Exhaustion and Sinking." In that paper I related the case of a patient I attended with fearful hæmorrhage after the removal of the placenta in three of her confinements, in the years 1827, '29, and '31. In her third confinement I was afraid she would die. I employed the usual remedies, such as sudden application of cold water to the abdomen, pressure to cause contraction of the uterus, and administration of tincture of opium; and during the three hours I remained with her I gave her half a pint of brandy and a pint of port wine. Notwithstanding these remedies, it was very evident that she was rapidly sinking. It occurred to me that in her former confinements, when I had used the same means to check the hæmorrhage, there was no amendment until she had ejected the contents of the stomach. I was then most anxious that vomiting should take place, in hope of relief. I thought as vomiting had been so beneficial to her before, I was in this case justified in producing it by giving an emetic. I directly gave her half a drachm of the powder of ipecacuanha: a full vomiting succeeded, a large quantity of fluid was ejected. I was much struck with an expression of my patient, which I had several times heard before in similar cases after vomiting: after a deep sigh, she said, "Oh! I'm better; I'm better, now." The hæmorrhage ceased directly, and did not return; the symptoms of sinking subsided; and the patient appeared in her natural state of body, but very feeble. A little plain gruel was all the nutriment given her, and she gradually recovered from her weak state.

In extreme cases of uterine hæmorrhage, where the remedies have failed, I have continued the use of emetics, with success, in my own practice, and also in consultation. A medical man in this town, engaged in extensive obstetric practice for the last ten years, informs me that, having commenced the treatment at my suggestion, he never knew it to fail in checking the hæmorrhage, although he does not resort to it until ordinary means have proved abortive. From the confidence he has in the remedy, he never fears the result in the worst of cases. He related to me an instance. A lady in this neighborhood had, after the birth of twins, the most uncontrollable flooding. An emetic was given her, but, not acting speedily, the fauces were irritated with a feather; vomiting ensued, and the hæmorrhage ceased immediately. Upon two subsequent confinements, when syncope was setting in, she exclaimed, "Oh, make me sick; I shall not be better till then." This was done, and the hæmorrhage and syncope ceased together.

The value of ipecacuanha consists in its emetic property in post-partum hæmorrhage, by exciting the contraction of the abdominal muscles and compression of the uterus, producing a powerful contraction of that organ. The extraordinary effects of emetic doses of ipecacuanha appear not to be generally known or appreciated, in acting as a powerful stimulant to the whole system, equalizing the circulation, promoting the secretions, and assisting each organ of the body to perform its normal functions. I know of no instance where ipecacuanha, acting as an emetic, has had a depressing effect; on the contrary, no remedy I am acquainted with has the same safe, quick, and satisfactory result in many cases of exhaustion and sinking.

I am, Sir, your obedient servant,
John Higginbottom, F.R.S., F.R.C.S.E.

Nottingham, 1860.

To the Editor of The Lancet.

Sir,—I have read Mr. Higginbottom's letter in the last number of your journal with great interest, as it relates to a practice of undoubted efficacy in a large class of very serious and important cases. I first saw Mr. Higginbottom's paper as an appendix to the second series of Dr. Marshall Hall's "Observations in Medicine," published in 1846; and having previously noticed the rapid improvement in cases of post-partum hæmorrhage after free vomiting, I felt so convinced of the propriety of the practice that I resolved to give it a trial on the first opportunity.

On October 28th, 1846, I was called to see Mrs. W——, a middle-aged woman, in labor of her third child. After a short labor, she was delivered of a still-born child; the placenta came away, and all seemed to be progressing satisfactorily. In the course of an hour, profuse flooding, followed by restlessness and extreme collapse, came on; in fact, there was every sign of impending dissolution. She had large doses of ergot and of ardent spirit, but without the least effect. All other means having failed, I considered myself justified in trying the effect of the ipecacuanha emetic. She accordingly had half a drachm in water, which was swallowed with difficulty; and a little warm tea was afterwards given at short intervals. Full vomiting speedily ensued, and was followed by an almost instantaneous cessation of the flooding. General action took place, and although she suffered long from extreme debility, nothing further occurred to check the successful progress of the case.

I am satisfied that the woman must have succumbed under any other treatment. With this impression, I have since fully adopted this plan, and always with the most satisfactory result. I have sometimes thought that benefit might be derived if the ipecacuanha were mixed with half a dessert-spoonful of the flour of mustard before administration, but I have not hitherto tried it.

I would only add that I consider the thanks of those engaged in this branch of our profession are especially due to Mr. Higginbottom.

I am, Sir, your obedient servant,
R. Harrison Bowness, L.R.C.P. Ed. (exam.) &c.

Poulton-le-Fylde, 1860.

To the Editor of The Lancet.

Sir,—In your publication of last week there is a letter from Mr. Higginbottom, of Nottingham, upon post-partum hæmorrhage, and the use of ipecacuanha as an emetic in such cases. I wish to state that I most fully concur in his very practical observations; but while admitting that I have not often used ipecacuanha in post-partum hæmorrhage, I beg to state that, having frequently used it in cases of abortion, I have found it to be most efficacious in such cases, and believe it to be necessary to their proper treatment in many instances. I was first induced to try its effects in abortion from the fact that I could not get the aborted ovum away until vomiting (so constantly attendant upon uterine hæmorrhage) had come on, and that, so soon as it occurred, the ovum was powerfully expelled, and the hæmorrhage ceased.

I believe that the advantage of ipecacuanha in all such cases is to be attributed to its more immediate action as an excitant of a powerful contraction of the diaphragm and abdominal muscles; and that its use as a "powerful restorative in some cases of exhaustion and sinking," as suggested by Mr. Higginbottom, is rather to be regarded as its more remote effect. The loss of blood is no doubt controlled, and relaxation of the os uteri produced, in cases of abortion, by the emetic influence of ipecacuanha.

I remain, Sir, your obedient servant,
Henry James, F.R.C.S.

City-road, Finsbury-square, 1860.

To the Editor of The Lancet.

Sir,—May I be permitted to remind your correspondents upon the subject of "post-partum hæmorrhage" that it was discussed in your pages thirty-three years ago. For thirty-six years I have never used any other than the means than advocated—e. g., "*efficient* abdominal friction with vaginal plugging," and I have never known it fail in any instance. It has this advantage over ice, iced-water injections, &c., that the means (for pressure) are always at hand, at all times, and in all seasons, which cannot be said of ice. Moreover, the efficacy of pressure is immediate, no loss of precious time occurred, the patient is at once safe, and the dormant or suspended contractility of the uterus has ample time to react.

I am induced thus to trespass upon your space, from the feeling that in the whole practice of the healing art there is not so terrible an emergency as the accession of hæmorrhage after delivery, and I therefore gladly impart the result of my own experience, believing the method I here indicate to be the most efficacious and safest of any yet proposed.

I am, Sir, your obediently,
Geo. Duplex, L R.C.P.E.

Torrington-square, 1860.

To the Editor of The Lancet.

Sir,—In your journal appeared, from the pen of Mr. Marley, a criticism on the use of cold water injected into the uterus to stay the flooding consequent on some labours. Most of those who perused that letter could not but agree with Mr. Marley in the introduction to this subject; yet, when once under weigh, I for one fancy his objection against the use of water is rather wholesale.

It was my lot to assist a relative of mine in a country practice, and during eighteen months I had occasion to resort no less than seven or eight times to means more potent than the dashing of water on the abdomen, and the flapping of wet cloths against the vulva, as recommended by Mr. Marley; and in those cases the *uterine injection* of cold water was the means adopted, and in each of the cases was it successful almost beyond my belief. Since that time I have used it, so that out of some hundreds of labor cases I have used it nineteen times without a failure, or the induction of one unfavorable symptom.

And now for the reason why I used water instead of ice, when the latter is supposed to possess so many preferable qualities. It is simply this, and I doubt not many country practitioners will approve my reason. When, but under circumstances the most fortunate, can an accoucheur, practising in some rural district, obtain ice at the very moment required—the critical moment, when the last ebb of a fellow-creature's life calls for the most prompt and decisive measures? It is all very well in an institution supplied with all the wants, real or imaginary. There, indeed, ice can be beneficially employed; but ask the country practitioner attending a case at midnight, far distant, may be, from another house, where he will seek the agent on which depends his patient's life and his own peace of mind? It is, therefore, evident that until the advance of science can enable us to procure ice on the instant, or at least lead us to foresee those cases in which the remedial aid of it will be required, many members of our profession will lack the opportunity of putting Mr. Marley's theory into practice. Again, it would seem that, in Mr. Marley's practice, the injection of water washed from the open mouths of the uterine vessels the coagula which Nature would form for the safety of the patient; but we must remember it is not when Nature is doing the work kindly for us that our interference is demanded, but in the onset, when the alarming discharge precludes the possibility of coagula being formed. I therefore hold, that when injection of cold water be properly performed, the shock, combined with the cold, will cause the uterus speedily to contract; upon which contraction, and the consequent closure of uterine vessels, I base my hopes in a case of post partum hæmorrhage.

In conclusion, permit me to remark, that it was far from my wish to argue that ice is *less* beneficial than water in its effects, either on theoretical or practical grounds. This merely would I wish understood, that water, when ice is not obtainable, is both safe and effectual in its action, and, as far as my experience goes, quite free from those deleterious properties imputed to it.

I trust the importance of this subject, although so feebly handled will be sufficient apology for thus trespassing on your valuable space.

I am, Sir, your obedient servant,
G. H. R., M.R.C.S., L.M., &c.

SCARLATINA MALIGNA.

To the Editor of THE LANCET.

SIR,—Scarlatina is so common a disease that even severe cases of the anginosa species are not worth recording; but the following case of scarlatina maligna was of so malignant a character, and of such a rapidly fatal termination, that it is worthy of having a place assigned to it in your scientific journal. Fortunately such cases are now very rare, owing chiefly to the attention at present paid to those sanitary laws which influence so powerfully the health of communities.

On the afternoon of the 24th February, 1859, I was called to see a lad, about nineteen years of age, a farm laborer in the vicinity, of a healthy constitution, and always previously in the enjoyment of good health. I found him laboring under symptoms of a very low typhoid type of fever; pulse weak, thready, about 140; tongue moist, coated with a dark-brown fur; papillæ enlarged, especially at the tip and the edges, and of a dark-red color; bowels then confined; face pale; eyeballs sunken with dark bluish circles underneath the lower eyelids; lips livid; features of a pinched and an anxious expression; headache chiefly in occiput; intellect clear; skin about the natural temperature in chest and abdomen, but below it in the extremities, with a few small, dark permanent petechiæ scattered over the body, chiefly, however, over the chest and the abdomen, but no eruption observable; great pain and difficulty in swallowing even liquids; enlargement and tenderness of the salivary glands, affecting speech and motion of the lower jaw; throat greatly inflamed; tonsils, uvula, and upper part of the pharynx swollen, of a dark red, ulcerated, ulcers covered with dark grey sloughs; breath fetid; thirst; urine scanty, of a port wine color; no vomiting, nor pain in epigastrium; loss of appetite; feeling of great prostration; pains in back, limbs, and in fact in the bones of the whole body; occasional rigors and flushes of heat; the throat the chief seat of the disease. He stated that though he had for the previous week felt languid, weak, indisposed for work, with loss of appetite, pains in his bones, and occasional chilly sensations, yet it was only on the evening of Feb. 23rd that he felt really unwell, having then been seized with violent fits of chilliness, and with great soreness of throat, and that even in the morning of the 24th he had attempted to work, but had been compelled to go to his bed about noon. I elicited from him that he had about ten days previously visited a house in his neighborhood two or three times, where there was a mild case of scarlatina, then rapidly recovering.

Feb. 25th.—All the above symptoms continued, and had become of a more aggravated nature, but still no eruption apparent; skin inclined to a pale, livid hue; bowels now loose, the stools being frequent, watery, of a tarry color, but containing no blood.

About eight o'clock on the morning of the 26th, a diffused eruption, of a dark dingy hue, almost purplish, for the first time appeared for about three hours, confined entirely to the chest and abdomen. It suddenly receded, followed by an exacerbation of *all* the symptoms—of the dyspnœa, the difficulty of swallowing, the sense of suffocation and of extreme prostration, &c., &c. He gradually sank, and expired at two P.M., having thus survived only about forty-eight hours after I had seen him. He had left off his work only a few hours previous to my visiting him. The usual remedies and appliances were employed, such as cold to head, blistering of temples and nape of neck, counter-irritation of throat, constant application of heat to the body and extremities, strong beef-tea, warm drinks, brandy and stimulants, a mild alterative and laxative at first, along with stimulants, diaphoretics, narcotics, and diuretics—such as camphor, ammonia, spirits of nitrous ether, ipecacuan, Dover's powder, hyoscyamus, and opium,—and saline mixtures, gargles of alum and of the mineral acids, &c.

This case, though derived from one of a mild form of scarlatina, was of the most malignant character.

It is worthy of remark, that there were neither vibices, nor any discharge of dark blood from any of the different emunctories; that there was no affection of the chest, nor of the head, as the intellect was clear to the last; but that, as the eruption was slight and evanescent, the virulent poison of the disease, though also affecting the mucous membrane of the intestines, appeared to have concentrated itself chiefly in the throat.

I am, Sir, yours respectfully,
J. B. Nicolson, M.D., M.R.C.S., L.S.A.

Robertsbridge, Sussex, 1860.

QUININE IN SCARLATINA MALIGNA.

To the Editor of The Lancet.

Sir,—Having read in your journal a brief account of scarlatina maligna proving fatal in about forty-eight hours, I venture to ask the writer of the case in question why he omitted from his long list of remedies the only reliable agent, disulphate of quinine? He mentions diuretics, diaphoretics, narcotics, and saline mixtures. He blistered the temples and nape of the neck, and applied cold to the head. But, without wishing to impugn his treatment, I cannot express any surprise at the result. For those who may have such cases to meet—and no doubt they occur only too often—I can forcibly recommend the use of quinine. My attention was first called to it, in this disease, by the excellent little work of Mr. Peter Hood, in which he so strongly urges its adoption in all forms of scarlet fever. I have put his plan to an extensive test in a large dispensary practice, and have every reason to bear testimony to its success. Without intruding further on your valuable space,

I am, Sir, yours obedient servant,
J. Hawkes

County Ophthalmic Hospital, Maidstone, 1860.

SCARLATINA MALIGNA.

To the Editor of The Lancet.

Sir,—Dr. Nicholson's case of scarlatina maligna inserted in our valuable journal is interesting, but I am sorry that no prominence is given therein to the use of the sesquicarbonate of ammonia. There is abundant evidence before the profession in proof that it contains specific powers over the worst forms of scarlatina, and that, when the eruption recedes, no means known have the same power in reproducing it and relieving the patient. The other remedies employed in this case had evidently no beneficial effect; but in many similar cases I am fully convinced that this preparation of ammonia, administered regularly day and night, *and trusted to alone*, with a mild aperient and a suitable diet, will be found fully equal to the restoration of the patient.

The great and superior value of this excellent medicine in scarlatina and rubeola is, I fear, but half apprehended by many professional men, and my object in this communication is to call their attention more fully to it.

I am, Sir, yours sincerely,
T. J. Graham, M.D., L.R.C.P. Ed., &c.

Epsom, Surrey, 1860.

CONGENITAL HYDROCEPHALUS.

To the Editor of The Lancet.

Sir,—If you consider that the following case will interest your readers, you are welcome to it for your valuable journal, as my mistake in the presentation may assist others similarly situated.

Mrs. G——, aged forty, in labour with her second child. The liquor amnii was suddenly discharged on the 20th of March, 1859; and I attended her at four A.M. on the 21st, and found the os uteri high up but well dilated, with the placenta apparently presenting. I at once passed up my left hand and secured the left foot, which was retained by tape. I then succeeded in bringing down the right foot, and after some difficulty, brought the head into the world, with a large hydrocephalic cyst growing at its posterior portion, and containing about three pints of fluid. This cyst having occupied the os uteri, while the head was resting on the pubis, misled me as to the nature of the presentation. The child was dead, but the mother did well, and has just been confined again with a fine healthy child.

I am, Sir, yours, &c.,
J. S. Bostock, M.R.C.S.

Horsham, Aug. 1860.

DR. BRAXTON HICKS' METHOD OF VERSION IN PLACENTA PRÆVIA.[*]

To the Editor of The Lancet.

Sir,—To add to the interest of the above-mentioned subject, I forward to you the following account of a case treated according to the plan recommended by Dr. Hicks:—

On the evening of July 28th, I was called by a midwife to see Mrs. F——, who was said to be flooding. She is a stout, healthy person, aged twenty-five, and within three weeks of the full term of her third pregnancy. She has suffered from hæmorrhage twice during the last five weeks. Yesterday it recommenced, and this evening a large quantity of blood has passed with very slight labour pains. I arrived about a quarter-past nine P.M. Blood was slowly passing away. She appeared pale, and the pulse was feeble, but not rapid. I immediately made an examination, and found the placenta presenting, the os uteri being dilated at least two inches. I introduced my hand into the vagina, when a strong pain came on, forcing the placenta onwards. I grasped it, and tried to assist its downward progress, at the same time a free discharge of blood was taking place. Fearing I should not soon succeed in removing the placenta, and should have some risk from hæmorrhage during its separation, I examined carefully for membranes, and succeeded in detecting high up, posteriorly, a smooth surface, through which I could feel the head of the fœtus. I pressed the head upwards, at the same time manipulating with the other hand on the abdomen. I soon felt the outlines of the arms, and, rupturing the membranes, I directly managed to hook down a knee, which I drew well through the os uteri. The hæmorrhage then ceased. I gave freely of brandy-and-water, with a dose of secale, and did not assist further the delivery until about twenty minutes had elapsed, and the pulse had become moderately full. I now used slight traction with the pains, and in a few minutes the child was born. The cord did not pulsate from the first. I think the child had been dead some time. It was small. The placenta passed immediately, and the uterus contracted well without hæmorrhage. The midwife, who had been in attendance since four P.M., calculated she had seen over two quarts of blood passed. I saw in the chamber utensil above a quart. The case is progressing favorably.

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[*] Vide p. 282, present No.

The placenta on examination was found lacerated, one edge of the rent corresponding with the insertion of the cord. As the placenta was in this case almost centrally situated over the os uteri, I believe Dr. Hicks' plan will be found generally useful, and that turning may be performed without introducing more than the fingers into the uterus. It is stated by some that hæmorrhage in these cases takes place from the placenta, where it is disconnected from the uterus. In this case I am as certain as I well can be that the blood did not pass from the exposed placenta, but from the inner surface of the uterus.

I remain, Sir, yours truly,
JOSEPH BANCROFT, M.D.
St. James'-street, Nottingham, 1860.

⁂ In Dr. Lee's "Clinical Midwifery" there are related many cases of turning without introducing the hand into the uterus.—ED. L.

PLACENTA PRÆVIA.

To the Editor of THE LANCET.

SIR,—Placenta prævia being happily of rare occurrence, and, according to the volume of the Obstetrical Society recently published, in one large number in the relative proportions as 1 in 330, in another as 1 in 380 cases, every instance of this complication it would seem is worthy of record. The perusal of Dr. Bancroft's letter, given in your journal last week, has suggested the mention of an example, the particulars of which I possess, and are as follow :—

On July 22d, 1857, when for a few days on a visit at Pickering, Yorkshire, I was called out of bed by Dr. Loy, of that place, to see with him a woman in labour, and respecting whose condition he manifested much anxiety. I found the patient to be a young, muscular, well-made woman, of twenty years of age, and about to give birth to her first child. She had a pale, exsanguinated expression ; the surface was cold, and the pulse small and quick. It was reported that she had had hæmorrhage during six or seven previous days. A medical attendant had seen her, but the flooding had continued, and under this alarm Dr. Loy had been called in. On making the examination I at once felt the soft, spongy, placental mass spread out completely over the os uteri. The pains were not, nor had they been, urgent ; but great gushes of blood afterwards came away, and there had been considerable hæmorrhage during the previous night. Dr. Loy gave it as his opinion, and as founded on more than half a century's experience, that if she were not at once delivered the general powers would succumb, and that she would be unequal to the parturient efforts. The os was not much larger than a florin, or at the most a half-crown piece. I concurred with him; and at his request I at once essayed to turn. Ergot and stimulants had already been given, but the pains were only occasional and ineffective. I carefully and for some time dilated with the fingers, and when the diameter had sufficiently increased, the hand was introduced, the placenta in doing so thrust aside, and in due course the feet were brought down. In sixteen or twenty minutes the head was born. The placenta was then taken away, and every effort had recourse to in order to induce speedy contraction. The post-partum hæmorrhage was less than might have been supposed. The condition of the heart's impulse suggested restoratives; brandy and ammonia were given, and for a time the pulse acquired greater volume. For a while we were hopeful that, although the child was still-born, the mother would do well. In half an hour from this the pulse began to flag ; she said "she could not see, she wanted air, and that she was going to die!" She waved her arms, and the sequel became only too obvious. Stimulants were repeated while she could perform deglutition, and hot applications were applied to the feet. They were vain. In another half hour she died.

I was conversant with the arguments used by Dr. Simpson, in which he recommends the removal of the placenta *first;* but it was felt that in this case the better plan would be to turn the mass to one side, because the pains were not active enough to keep the head in just apposition to the site of the placental attachment, and because this was a primiparous case, and its exigencies demanded delivery with as little delay as possible. I was obliged to introduce the hand into the uterine cavity as the feet could not be felt without so doing.

I am, Sir, your obedient servant,
J. R. WARDELL, M.D., M.R.C.P.
Tunbridge Wells, 1860.

ON PERIODICITY AS A CHARACTER OF DISEASE.

To the Editor of THE LANCET.

SIR,—I shall feel obliged if you would allow me to add a few lines in confirmation of the views expressed by Mr. Hughes in his paper on the above subject.[*] Believing that the periodical phenomena occurring in the system are to be referred to the ganglionic nerves, and that each menstrual process is analogous to a fit of ague, I was induced, many years ago, to try the best toner of the vaso-motor nerves—sulphate of quinine, whenever the menstrual period recurred every second or third week instead of at the normal period, the fourth week. I have very seldom found the plan to fail, unless the change in the menstrual type was caused by severe inflammation of the neck of the womb. I have given the sulphate of quinine alone, in doses of from two to three grains every night or every other night, immediately after the subsidence of menstruation. The same dose of sulphate of quinine may be combined with two grains of extract of hyoscyamus, or a quarter of a grain of extract of opium, when nervous symptoms predominate, or with sulphate of iron if the patient be anæmic, or with extract of aloes in sufficient quantities to prevent constipation.

For more ample details I may refer Mr. Hughes to a paper which you did me the honor to publish in 1851, and to a chapter in my work on Diseases of Women, "On Type in Menstruation."

I remain, Sir, faithfully yours,
E. J. TILT, M.D.
Grosvenor-street, Aug. 28th, 1860.

SHALL HARVEY HAVE A STATUE?

To the Editor of THE LANCET.

SIR,—No one who feels interested alike in the advancement of medical science, and the proper recognition of the genius and labors of the illustrious men to whom that science is indebted for the enunciation of its great truths, can contemplate without feelings of regret, nay, even almost of shame, the neglect to which the remains of the discoverer of the circulation are consigned, and the apathy which exists with reference to an acknowledgment of his [illegible]vices. A writer in a recent number of a med[illegible] quarterly urges upon the attention of the Colleg[illegible] Physicians the subject of a statue to Harvey, an[illegible] presses an opinion that a subscription for such object would meet with cordial support. In this opinion, probably, most members of the profession will concur. If, indeed, anything is to be done to place Harvey in the position in which Jenner has been placed, and to which Hunter is about to be raised, it is high time that the work should be commenced. To the College of Physicians belong the privilege and the honor of initiating the movement. Once begun, it would assuredly prosper; and while the artist's chisel is moulding the block from which the likeness of Hunter is to spring, the memorial to Harvey would assume a definite shape; and the same day which is to see the unveiling of the former, might also witness the inauguration of the latter.

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[*] Ante, p. 286.

I am, Sir, your obedient servant,
MEDICUS.

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HYPODERMIC INJECTION OF MORPHIA.

To the Editor of THE LANCET.

SIR,—Under the above heading, in your journal,* Dr. R. H. Bakewell has given the result of his experience of the hypodermic injection of morphia in neuralgic affections. While agreeing with this gentleman that sickness and other untoward symptoms do sometimes occur, I beg to state that, so far as my experience goes, such is the exception, and not the rule, when this method of medication is adopted; and as I can give the results of some fifty cases of the above method of treatment for neuralgia, &c., I venture to speak with some confidence.

The form in which I employed this remedy was the solution of the London Pharmacopœia. Of this, I have been in the habit of injecting from ten to thirty minims, as near as possible to the seat of pain. The usual result of my treatment has been the procuring of sleep within half an hour, and subsequent relief from pain, especially when the larger quantity of solution was used. Sickness seldom followed; in some cases, however, this did occur with some severity, accompanied with itchiness of the skin, and the formation of small local abscesses. These abscesses I found troublesome, and slow to heal; but I can decidedly say that these untoward symptoms were not by any means such as to dissuade me from using the morphia hypodermically, in well-selected cases.

The permanence of the relief afforded by this method is a question upon which I would beg permission to say a few words. The notes which I have taken of the results of a considerable number of cases warrant me in saying that it fails to produce this desirable effect. True, immediate relief is nearly always obtained, and its influence upon the system is rapidly exerted; but a recurrence of the neuralgia frequently occurs, which a repetition of the injection fails to subdue. This fact, coupled with the unpleasant symptoms above-mentioned, will, I think, prevent its general use, if not in hospitals, at least in private practice.

Diseases of a formidable and intractable nature, such as delirium tremens, tetanus, &c., are cases where the employment of this form of treatment may possibly be attended with happy results, and in which the minor objections of sickness, &c., may be safely overlooked.

I am, Sir, your obedient servant,
JOHN H. JEPHSON, M.D., M.R.C.P.L.,
Physician to the Great Northern Hospital and Westminster General Dispensary.
Conduit-street West, Hyde-park, 1860.

THE PAY IN THE INDIAN MEDICAL SERVICE.

To the Editor of THE LANCET.

SIR,—Sundry remarks have appeared in your journal regarding the Indian medical service. Intending candidates will be able to judge for themselves as to the money value of their appointments from my pay statement for three months, and which I append to this. By the Warrant for the Royal Army, assistant-surgeons, after six years service, obtain an increase of pay. No increase is allowed to us. I, an assistant surgeon of fourteen years' standing, and a friend who entered the service in 1842, and who is not likely to be promoted for the next three years, receive no more pay when on furlough than a medical officer of the Royal Army does when he first joins:—

Furlough pay (May, June, July) ...		£29 18 0
Less Military Fund ...	£2 8 9	
" Orphan Fund ...	1 17 6	... 5 9 7
" Income-tax	1 3 4	
		24 8 5
Commission		0 5 0
		£24 3 5

The above ought to damp any young fellow's ardor, and make him hesitate before he enters a service in which he will be worse paid than a butler. The civilian when on furlough receives £500 a year; why should the doctor receive less than a fifth of this sum?

MADRAPORE.
August, 1860.

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SICK AND WOUNDED IN SICILY.

To the Editor of THE LANCET.

SIR,—May I ask your permission to acknowledge the contributions which have been forwarded to me up to the present day by the surgical instrument-makers and drug dealers of London for transmission to Garibaldi. Their estimated value exceeds £600.

They are shipped for their destination, and will, I hope, have started before this meets the eyes of your readers, under the care of an able physician, who volunteers for service in the Sicilian hospitals, and who will watch over and communicate the ultimate disposition of these and any further supplies.

I subjoin the list as it at present stands, and apologizing for so lengthy an intrusion on your columns,

I remain, Sir, your obedient servant,
ERNEST HART, M.R.C.S.
69, Wimpole-street.

Messrs. Evans and Stevens, Old Fish-street: 12 double inclined planes, 9 wooden legs above the knee, 6 iron field-splints, 370 surgeons sponges, 25 arm slings, 2 large cupping instruments, 50 bag trusses, 25 screw torniquets, 50 field ditto, 36 elastic gum catheters, 6 cases of scalpels, 6 pairs of bullet forceps, 6 ditto bone forceps, 10 ditto dressing forceps, 12 ditto artery forceps.

Messrs. S. Maw and Son: 4 sets of pulleys and bandages for dislocations, 3 sets of tracheotomy tubes, 12 dozen of surgeons' needles, 1 lb of suture silk, 1 dozen arm slings, 12 dozen of Taylor's roller bandages, 1 dozen pasteboards for splints, and 112lb of Tripe and Taylor's lint.

Messrs. Savory and Moore: 2 patent field panniers, containing medicines and appliances for a regiment in the field, 300 yards of oiled paper, and a supply of opiates.

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* Sept. No.—page 289.

Messrs. Whicker and Blaise: 12 double inclined planes, 12 pairs of leg splints, 12 pairs of thigh splints, 12 pairs of arm splints, 500 rollers, 12 screw torniquets, 12 field torniquets, 12 artificial legs, and 1 set complete of capital instruments, value thirty guineas.

Heather Bigg, Esq.: 20 artificial legs, 20 artificial arms, 25 whalebone splints, 25 crutches, and 25 rollers.

Messrs. J. W. Silver and Co.: 300 yards of india-rubber water-proof sheeting, 100 stump pads, and 2 portable baths.

Messrs. Howard and Sons: 48 pints of solution of quinine (1 oz. containing ¼ oz. of amorphous quinine), and 14 lb. of calomel.

Daniel Hanbury, Jr., Esq.: 325 yards of adhesive plaster.

Messrs. Morgan Brothers: 200 yards of lint, and 6 yards of enamelled oil-skin.

Messrs. Hotchkinson and Tong: 1 bale of lint.

Messrs. Bullock and Reynolds: 50 oz. of sulphate of cinchonine, and 20 oz. of liq. quinæ amorph. (5 minims containing 1 grain).

Messrs. Warner and Barclay: 50 yards of strapping.

Messrs. F. Newbery and Son: 1 doz. oz. of pulv. Jacobi ver.

C. W. Eddy, Esq.: 25 oz. of sulphate of quinine.

Messrs. Corbyn and Co.: Quinine, chloroform, 4 lb. of gum kino, and 2 lb. of opium.

Messrs. J. Bell and Co.: Chloroform and opium confection.

J. T. Davenport, Esq.: 48 oz. of chlorodyne.

Messrs. Ferguson and Sons: A case of instruments and appliances.

Frederick Walters, Esq.: An assortment of splints, rollers, cotton wool, bleeding-basins, &c.

J. Coxeter, Esq.: An assortment of bullet and artery forceps.

Dr. J. Collis Browne: An assortment of arm and leg splint.

Sir J. Murray: A case of fluid magnesia (through S. Linder, Esq., Strand).

J. B. Rixon, Esq.; 18 bottles of Condy's fluid.

F. Cockerill, Esq.: 3 oz. of quinine.

F. Gristock, Esq.: 6 oz. ditto.

E. Watts, Esq.: Lint and strapping.

T. Trask, Esq.: 4 lb. of lint.

Sums of money: D. B. Hanbury, Esq., £2 2*s.*; C. Deane, Esq., £2 2*s.*; Messrs. Morson and Co., £2 2*s.*; Miss Halliday, £1; W. T. Cooper, Esq, £1 1*s.*; J. Orp, Esq., 10*s.*; A Reader, 5*s.*; Noble, Esq., 10*s.*

THE WAR IN SICILY.

(FROM OUR SPECIAL CORRESPONDENT.)

ITALY presents a spectacle which amply repays the trouble of a journey from England to witness it. All the young men from the north and centre seem to be on a pilgrimage to join Garibaldi. The Central Committee of Genoa cannot find sufficient steamers to convey these heroic patriots to the island. Garibaldi is the subject of conversation of old and young men and women; his name is chanted in the streets by half-naked infants who have just commenced to articulate. The enthusiasm is so great that one cannot help being carried away by the stream of public joy and excitement, especially at this moment when we hear that the national troops have entered Messina and the Neapolitans are about to evacuate the fortress.

But it is greatly to be regretted that in the explosion of public sympathy very little has as yet been done for those unfortunate braves who have suffered in the defence of their country. We could hardly have expected better things, for the Government, as well as everything else, is in such a chaotic state that those who are unable to help themselves are ill off indeed.

I visited to-day the hospital of the wounded at the bombardment of this city, and at the battle of Calatafimi. It is all in a state of *improviso* in the College of the Jesuits, who have recently been driven out by Garibaldi's Government. There were at first about 120 wounded; of which number, forty only remain, some having already been discharged, and others removed to their friends, or to private hotels.

There are some cases of gun-shot wounds, of which I shall notice only one, on account of its remarkable character. The ball entered at the left hypogastric region of the right side, three inches below the umbilicus, where there is a strong indurated cicatrix, and made its exit at the trochanter major, injuring the head of the tuberosity. An old man is laid up with fracture of the femur, caused by a ball, which entered at the hip. I mention this last case because I was quite thunder-struck when I saw the apparatus into which that limb was put; it is a regular *improviso* work. Robinson Crusoe, I am sure, would have managed to get better splints, and to dress it more Christian-like.

I asked the house-surgeon how it was that they could not get up a better apparatus for this patient, and for others which I need not specify now. The poor man began to complain bitterly about the administration, and about everything connected with the establishment. Mrs. Mario, an English lady, was, till last week, at the head of the institution, but has left for Milazzo. I was requested to go there and take charge of the management of the medical ambulances, but was detained here by the *General Intendent*, who wishes me to go with him to Garibaldi's headquarters, which is now at Messina, but where it may be to-morrow none but himself knows. I have the more cheerfully accepted his offer, which will afford me an opportunity of submitting a plan for the management of the medical department.

Palermo, Aug 3rd, 1860 [illegible]

HAVING been commissioned by the Secretary of War to visit the hospitals of Barcelona and Milazzo, with the view of introducing some improvement into the organization of a medical staff and sanitary department, which presents the picture of a chaos, I send you some extracts of my report, which may be of some interest to the profession.

Of the 130 to 300 wounded who entered the hospitals after the battle of Milazzo, 98 are still under treatment; 39 of whom are volunteers, and 9 Neapolitans. The former have all, with 3 exceptions, their wounds by firearms in front; whilst 7 of the latter have their wounds posteriorly; and 2 sustained bayonet cuts anteriorly. 68 are in a state of convalescence, burning with impatience to take the field; 8 have undergone amputation; 22 are seriously injured—6, I think, past hope of recovery. As far as I could ascertain, there were 6 or 7 cases of death. Some of the hospitals keeping no books, and the officers changing frequently, [illegible] mean of course be ascertained with absolute certainty as to the statistics of the institutions.

They were just about to close the hospital of Milazzo, and transport all the wounded to Barcelona; but, on examining the position of the two places, I found Milazzo far preferable, and as Barcelona can by no means boast of a superabundance of accommodation, I warned them to be aware of crowded hospitals at this season of the year, when the malaria is rife, and when the thermometer ranges about 96° Fahr. in the shade! I found several patients suffering the agony of spasmodic pain from foreign bodies being impacted within a nerve, or in some where the nerves were implicated in a cicatrix. I cut down, in two instances, upon the median and popliteal nerve, and succeeded in taking out some foreign bodies, soothing the pain by a solution of atropine.

In comminuted fractures of the extremities, I introduced the perpetual cold water drops, which proved a sovereign remedy in the hands of the surgeons of Val de Grâce. In other comminuted fractures I recommended the application of acid nitrate of mercury, which did good service in some desperate cases I have seen. I have the satisfaction in stating that, amongst the crowd of mutilators, I have found some highly intelligent and clever surgeons, and that all showed themselves obedient, ready, and thankful for the instruction given.

Perhaps it may not be out of place to give you a view of some curious gunshot wounds:—

1. Entrance, inguinal region; exit, dorsum penis, near glans; lesion, atrophy of one testicle, urethra perforated in three places.
2. Entrance, anguli oris; exit, cheek, opposite side; lesion, perforation of palate, fracture of inferior maxilla.
3. Entrance, neck near jugular vein; exit, angle of eye, opposite side; lesion, perforation of palate, fracture of lower maxilla in three pieces, destruction of the globe of the eye (the only one he had.)
4. Entrance, abdomen, near seventh rib; exit, opposite fifth rib; lesion inconsiderable.
5. Entrance, near hip; exit, perinæum, opposite side.
6. Entrance, right arm, passed into chest from the right to left side; lesion to arm and chest, perforation of pleura and lungs, and impacted there; death.
7. Entrance, ala nasi; exit, anterior angle of neck; lesion, broken palate, and seven times hæmorrhage from the jugular vein.
8. Entrance, neck; exit, cheek; lesion, lacerated tongue.

The greater parts are fractures of bones of the lower and upper extremities.

Milazzo, August 15th, 1860.

After returning from Milazzo, I find our army (12,000) stationed at Favo, in a bad condition. Favo is south-east of this place, at the entrance of the Strait of Messina. It is a village of about sixty houses in two rows at the sea-shore; it forms a perfect plain opposite Calabria. The soldiers have no shelter all day; they are exposed to the burning sun, 96° to 98° Fahr., and at night the cold is excessive (I cannot state exactly the degree of cold.) It is surrounded by a marshy district. There is neither bread nor water, nor anything to be had. I found 500 laid up with intermittent fever of a malignant type. The fever is tertiary, sometimes it becomes quotidian; its peculiar characteristic is epistaxis (sometimes very troublesome), and complete prostration of strength. We lose one or two per day. I told the General Commissariat that if we should have rain some of these days, it is to be apprehended that the Messina hospitals will become very small. Several more will have to be opened. The sanitary arrangements being miserable, and everything in a state of confusion, one has to struggle against strange odds when wishing to do something for the benefit of these patriotic heroes.

Pray draw attention to the fact that we are much in want of quinine, instruments, shirts, towels, linen of every description, pillows, &c., for we are in a desperate state indeed. I wrote that we are losing two per day, but it is rising very rapidly; and the poor volunteers are packed like herrings in the hospitals, or rather in holes of stench and filth, without pillows, sheets, or anything. We are setting out upon a campaign without an ounce of quinine, in a marshy district, and without a sharp knife.

Messina, Aug. 17th, 1860.

THE HEALTH OF SIR BENJAMIN BRODIE.

Several rumors, more or less erroneous, have been recently promulgated concerning the health of Sir Benjamin Brodie. It is a natural feeling and one that marks the deep veneration and affection with which this distinguished surgeon is universally regarded that great interest should be exhibited in his personal welfare. He has lately undergone an operation, undertaken with the view of restoring vision, which had become impaired either from advancing cataract or glaucoma. It is understood that the operation has failed. All will hope that the failure is not irremediable. As no man living has done more honor to Surgery, so no one has a better claim to benefit by all the resources of the Art. It will be a subject of lasting regret should it prove that Sir Benjamin Brodie has suffered from any error of diagnosis or of treatment. The warmest sympathies of the entire profession are with the respected sufferer in his case.

SPECIAL HOSPITALS.

We, the undersigned, are of opinion that much detriment to the public and to the medical profession arises from the modern practice of opening small institutions, under the name of hospitals, for particular forms of disease, in the treatment of which no other management, appliance, or attention is required, than is already supplied in the existing general hospitals.

The practice is injurious, First, because in the maintenance of numerous small establishments the funds designed for the direct relief of the sick poor are wasted in the useless multiplication of expensive buildings, salaries, and hospital appliances, and in the custom of constantly advertising to attract public attention.

Secondly, because the public is led to believe that particular classes of disease can be more successfully treated in the small special institutions than in the general hospitals—an assumption directly contrary to evidence; the fact being that the resources of the general hospitals are in every respect superior to those of the special institutions alluded to.

Thirdly, because it is essential for the interests of the public, with a view to the efficient education of students preparing for the practice of the medical profession, that all forms of disease should, as far as possible, be collected in the general hospitals to which medical schools are attached.

As an example that the evil referred to is increasing, we regret to observe that an attempt is being made to set on foot a Special Hospital for the Treatment of Stone and Diseases of the Urinary Organs. We desire to express our opinion that such an institution is especially unnecessary; the existing general hospitals provide ample accommodation for the treatment of all these maladies; *no case is ever refused admission into them;* there are no diseases which receive more care, attention, and skilful management; and there are no men in this or any other country who have greater experience in treating them than the surgeons of our general hospitals.

Signed by Sir Benjamin C. Brodie, Bart.,
President of the Royal Society.
Joseph H. Green, F.R.S.,
President of the Medical Council.
Thos. Mayo, M.D., F.R.S.,
President of the Royal College of Physicians.
J. F. South,
President of the Royal College of Surgeons.
James Moncrieff Arnott, F.R.S.,
Late President of the Royal College of Surgeons.
Sir James Clark, Bart.,
Physician to the Queen.
Sir Henry Holland, M.D., F.R.S.,
Physician in Ordinary to the Queen.
Sir Charles Locock, Bart.,
Physician-Accoucheur to the Queen.
P. M. Latham, M.D.,
Physician Extraordinary to the Queen.
Thomas Watson, M.D., F.R.S.,
Physician Extraordinary to the Queen.
W. Gibson, M.D., C.B.,
Director-General of the Army Medical Department.
Sir John Liddell, C.B., F.R.S., M.D.,
Director-General of the Navy Medical Department.
Sir J. Ranald Martin, C.B., F.R.S.,
Physician to the Council of India.
B. G. Babbington, M.D., F.R.S.,
President of the Epidemiological Society.
Sir Chas. Hastings, M.D.,
President of the British Medical Association.
S. H. James, Esq., F.R.C.S.,
Consulting Surgeon to the Devon & Exeter Hospital.
J. A. Symonds, M.D.,
Consulting Physician to the Bristol General Hosp.
And many others.

SIR BENJAMIN BRODIE ON SPECIAL HOSPITALS.

To the Members of the Deputation appointed by the Representatives of the Medical Staffs of General Hospitals.

Dear Sirs,—Agreeing in the views expressed in the paper which you have sent me, I am happy to add my signature to it.

An exception, indeed, may be made, on grounds which meet with the general concurrence of the profession and the public, in regard to ophthalmic infirmaries. Otherwise it seems to me there are very great objections to the establishment of special hospitals for the treatment of particular diseases.

1st. Diseases generally are so connected with each other, a knowledge of one is so necessary to the right understanding of another, that no one who limits his attention to any given disease, can be so competent to investigate its nature, and to improve the method of treating it, as those are who have a wider field of observation, and who are better acquainted with general pathology.

2ndly.—The effect of establishing special hospitals and infirmaries is to abstract particular classes of disease from the general hospitals, and thus to prevent the students of those hospitals from having the opportunity of studying certain branches of their profession, an acquaintance with which is necessary to make them useful practitioners afterwards.

3rdly. The system of establishing special hospitals, which now prevails, is a source of much unnecessary expense to the public; each one of these, however humble it may be, requiring a separate house, and a separate establishment of matron, nurses, and servants. At least two-thirds of the expense thus incurred would be saved, if the patients who are there admitted were sent to the existing general hospitals instead; and it cannot be said that in these last there is no room for their reception, there being several which are languishing for want of funds, with their wards empty, because the means of supporting them have been drawn away to other institutions.

I am, dear Sirs, yours truly,
Benjamin C. Brodie.

Broome-park, Betchworth, Surrey, July 16th, 1860.

News Items, Medical Facts, &c.

The late African Campaign.—The following is the Sanitary Report of the Spanish Army from Nov. 19th, 1859, to March 24th, 1860:—

Total Cases Treated—

	Officers.	Men.
Wounded	334	5,636
Sick	205	32,269
Total	539	37,905

Of the above were Cured—

	Officers.	Men.
Wounded	210	3,872
Sick	148	25,120
Total	358	28,991

Number of Deaths—

	Officers.	Men.
Wounded	28	299
Sick	32	2,714
Total	60	3,004

Remaining in Hospitals—

	Officers.	Men.
Wounded	116	1,474
Sick	23	4,435
Total	139	5,909

Remarks.—According to these data, it appears that—

1. Amongst the wounded, officers and men included, the average mortality was 8 per cent; whereas in every 100 soldiers laboring under various diseases, 16 died, but only 8 per cent. of sick officers, or just half the former proportion.

2. When these returns were made, there still remained, as previously stated, 6048 officers and men under treatment.

3. No mention being officially made respecting the total number killed in action, it hence becomes impossible to ascertain what loss the Spanish expeditionary army to Africa actually sustained. Still the lives there sacrificed were doubtless considerable, seeing that upwards of 3000 persons died in hospital, wholly irrespective of fatal contingencies in the field.

Death from a Dissecting Wound.—M. Dumay, demonstrator of anatomy at the dissecting-rooms of the Faculty of Paris, has just died in consequence of a slight wound received whilst demonstrating. The deceased was much esteemed as a teacher, and had been attached to the school for many years.

Poisoning by Colchicum Seeds.—"L'Echo Medical Suisse" states that two children at Chezard (Switzerland) died in consequence of eating colchicum seeds, which they had found on the grass.

The Causes of Death.—Out of 100 deaths in England and Wales in 1858, the last year for which the cause of death have been examined, 25 were from zymotic diseases, 19 from constitutional diseases, 37 from local diseases, 16 from developmental diseases, and 3 from accidental or other violence. Zymotic diseases were exceedingly fatal, especially scarlatina, which, with its auxiliary diphtheria, caused 30,317 deaths. Small-pox and measles destroyed—the one 6,460 lives, the other 9,271. Syphilitic diseases killed 1006 persons, above 700 of them infants, who receive it as their only inheritance. Want was recorded as the cause of death in 62 instances; but, observes Dr. Farr, in how many more was it the real, though unavowed, source, or support of fatal disease, it was impossible that register-books could reveal. Almost 1000 children died from want of breast-milk; "alcoholism" destroyed 712 persons, the deaths of 288 being expressly referred to intemperance, and 424 more vaguely to delirium tremens. In the second class,—the constitutional,—which includes tubercular diseases, it is found that the rate of mortality from phthisis in London and in the Welsh division was nearly the same, though the two districts differ widely in important circumstances; but other pulmonary diseases—bronchitis, pneumonia, asthma, &c.,—were more than three times as fatal in London as in Wales. In the third class—local diseases—there was a clear increase in affections of the brain, the heart, the lungs, and the kidneys, a very remarkable decrease in phlegmon. In the fourth class—developmental diseases—there was an increase in the deaths from old age, caused by the cold of winter. 3,131 mothers died from childbearing—a considerable increase of mortality, supposed to be caused partly by the general unhealthiness of the year, and partly by privations occasioned by the distress resulting from the commercial crisis at the close of 1857. There were six diseases, each of which killed above 25,000 persons in the year—phthisis, 60,442; scarlatina, 30,317; bronchitis, 29,093; atrophy and debility, 26,860: pneumonia, 26,486; convulsions, 25,488 (children). Diseases are ranged in the Registrar-General's reports in 112 classes, or we might say groups, so many are the foes ever on the watch for us. Of the deaths in 1858, half were of persons under seventeen years of age; four out of ten were under five years of age. On the registers for the first quarter of the year being examined, it was found that 7,275 persons died without any medical attendant to certify the cause of their death—six in 100 of the deaths. In Manchester, 181 persons out of 1,755, the number who died in the quarter, had no medical attendance in their last illness; in Yorkshire, as many as 10 persons out of 100, and in the Welsh division at least 12 out of the same number.

London and its Health.—London, says the Registrar-General, now covers 121 square miles—a square of 11 miles to the side. It is equal to three Londons of 1800. It increases at the rate of 1000 a week, half by births (their excess over deaths), and half by immigration (its excess over emigration). It is remarkable that in London one in six of those who leave the world dies in one of the public institutions—a workhouse, hospital, asylum, or prison. Nearly one in eleven of the deaths is in a workhouse. For the improvement of the health of London three things are to be aimed at: pure air to breathe, pure water to drink, and a healthy soil to live on. The Registrar-General observes that there are above 2000 medical men in London and its vicinity; but they are chiefly employed in treating disease—the art of preventing it is not cultivated; it is not taught in any of our medical schools; it is not formally the subject of examination in our universities. The father of a family does not go to the doctor and say, "How can I preserve my health, make my children well and vigorous, and develop all their faculties to the fullest extent?" Imagine the 2000 members of the most enlightened profession in the country employed in instructing the people in the way of a healthy life. How many thousands of lives would be saved every year in London! How much better and happier the population would be! A beginning of a movement has been made in the right direction, under Sir D Hall's Act. Medical health officers are appointed in the various districts of London, and many of them are working courageously against ignorant opposition, with success. They deserve public approbation, for they have done quietly a great deal of good work, and it is probable, have saved many lives and prevented much sickness.—*The Times.*

A New Supernatural Journal in Paris.—Since January of this year, a new journal has been published at Paris under the following title:—"The Uniter of the Visible and Invisible World: a universal journal of artistic, scientific, historical, philosophical, literary, and religious unity; and organ of the miracles and revelations operated in the person of M Gagne by the spirit which has vouchsafed to inspire him, drives him to sacred objects, and allows him to recognise the morality and truth of all things, to write under divine dictation, to cure and convert the sick, the insane, and those possessed by the evil spirit, these being falsely looked upon as laboring under hallucinations. By the divine spirit, M. Gagne undertakes to prove that table-turning, spirit-rapping, magnetism, somnambulism, magic, soothsaying by means of cards, hypnotism, &c., &c., are diabolical practices, and always attract demoniacal spirits. The editor will prove all his assertions by public experiments. Proprietor, M. Gagne, Judicial Counsel to the Insane: author of 'Suicide,' a poem; 'Monopanglottis, or Universal Language;' 'The World a Stage,' 'The Unitism,' a poem in twelve cantos and sixty acts, &c., &c.

Specialities of the Present day no Novelty.—The system of special practice, which is becoming so prevalent at the present time, existed amongst the ancient Egyptians, for Herodotus speaks of their having doctors for almost every part of the body, of which the eye and other organs are particularly mentioned. Our specialism would seem, then, to be merely a revival of an ancient though not enlightened practice.

Accidental Poisoning.—M. Danergwald, Minister of State, Berlin, has just had a narrow escape from a fatal accident of this kind. He is now under medical treatment, and drinking the water of Ems. A bottle similar in appearance was brought to him, and he had put a glassful to his mouth, when he fortunately detected the error in time to escape with only burning his mouth and lips, not having swallowed any of the fluid.

Trial of a Military Surgeon in India.—The *Bombay Times and Standard* of the 29th of June gives a full report of the trial of Dr. Boate, formerly of the 6th Innis killens, for cutting and wounding Captain Gillett. The case offers a melancholy instance of the distressing consequences of squabbles and invectives amongst persons of education. The jury found Dr. Boate guilt; and the judge sentenced him to six months' imprisonment with hard labor.

Another Specific Remedy for Cancer.—Three medical practitioners coming from the steppes of Kirghis, a vast tract of land situated between the boundaries of China and Russia, have lately arrived in St. Petersburg to offer a specific remedy for cancer. The Academy of Medicine of St. Petersburg has refused permission to, institute experiments in the hospitals to test the new remedy.

The John Hunter Statue.—The medical profession in this country will learn with satisfaction that Mr. South, the President of the Royal College of Surgeons, has received, through Dr. Bowditch, of Boston, U.S., £45, as a first instalment from the State of Massachusetts towards the statue. Mr. Weekes, the eminent sculptor, has already commenced his work.

PRINTED AND PUBLISHED
By JAMES HERALD, 24 Ann-Street,
NEW-YORK.

THE LANCET.

Journal of Medical, Surgical and Chemical Science and Practice, Criticism, Literature and News.

MR. WAKLEY, M.P. EDITOR. J. HENRY BENNET, M.D., J. WAKLEY, Jr. SUB-EDITORS.

IN TWO VOLUMES ANNUALLY.

Vol. 2. NEW YORK, NOVEMBER, 1860. No. 5

A Course of Lectures

ON

PAIN,

AND THE

THERAPEUTIC INFLUENCE OF MECHANICAL AND PHYSIOLOGICAL REST

IN

ACCIDENTS AND SURGICAL DISEASES,

Delivered in the Theatre of the Royal College of Surgeons.

By John Hilton, Esq., F.R.S.,

SURGEON TO GUY'S HOSPITAL, PROFESSOR OF ANATOMY AND SURGERY TO THE ROYAL COLLEGE OF SURGEONS.

LECTURE I.—(Part II.)

Mr President and Gentlemen,—Having thus briefly and very imperfectly reviewed the subject of rest in relation to the body generally, let us inquire into some of the expedients which Nature adopts to the same end in its individual organs.

Activity and rest, alternating and in due relation to each other, form the physiological basis of, and key to, health in man, and, perhaps, in all living organs. All viscera (as in the case of the brain, to which I have already alluded) require the alternate condition of activity and rest to keep them vigorous and in health; and if this condition be not observed or attended to, structural changes and deterioration of vital endowment or function are sure to happen to them. Indeed, in reference to the etiology of the diseases of individual organs, it may be asserted that a large proportion of these diseases originate in circumstances which deprive the organ of that rest which nature has rendered necessary to the performance of its healthy function.

For example, the heart, overtasked by constant emotional influences, or excessive athletic exercises, and thus deprived of its appropriate rest, becomes prone to the various alterations in its structures which necroscopic examinations daily reveal. The liver, unduly stimulated by excessive potations, an unnecessary amount of food, or habitual irregularity of diet, (its physiological harmony with the other organs of digestion being thus constantly disturbed,) glides into disorganization for the same reason. The kidney, too, if its function be disturbed by the abuse or too frequent use of alcoholic and other fermented drinks, which entails an unnatural and continued stress either upon its Malpighian or tubular portions, obeys the same tendency to structural deterioration, as a consequence of its loss of due rest.

How different is the effect of rest upon any machinery invented or constructed by man; how utterly abandoned is the expectation of hope of man's ever contriving any machinery that may have the power to repair its own waste of structure, or to renovate by its own inherent capability, any defect in its combination. However exquisite and perfect it may appear to be, its "wear and tear" is continuous with its mechanical activity; its rest creates its own imperfections, and induces decay; its necessary renewal is the substitution, by other hands, of a new and like material.

It is, I believe, an admitted physiological axiom, that each structure or organ, whilst actively employed, is in a state of vascular excitement or turgescence, and therefore enlarged during that time.

So it is noticeable, that each organ of the body, which is liable to the rapid supervention of activity, in its proper function, is so placed in relation to surrounding structures. as to permit of temporary enlargement during the persistence of its exalted function; and that when it returns to its state of rest, or period of self-reparation, it may be said to have resumed its normal or standard dimensions.

Secreting organs, in which vascular turgescence is extreme and enduring, are relieved of their excessive congestion by their tubular outlets, the elasticity of the enclosing capsule exerting its ficial effect towards the same end by inducing centripetal pressure; this tends to diminish the size of the organ as soon as its higher endowment, its engendered function of physiological excitement or orgasm begins to diminish; the elastic capsule thus maintaining the healthy quiescent size of the organ.

The liver is enclosed within a strong elastic peritoneum, and it has also its proper elastic but thin capsule; and I may add, as probable, that the structure found in Glisson's capsule, surrounding the portal vessels, &c., in their distribution within the liver, may influence their condition by its elasticity. These forces, aided by the contractile power of the bloodvessels themselves, bring the liver back to its condition of rest, and maintain it so; thus allowing the individual minute secreting parts of the liver to recover their physiological strength and their tone.

Again, the liver is so placed as to have the additional advantage of pressure from without, by its subjection to the contractile power of the muscular walls of the abdominal parietes and the diaphragm, especially during exercise and hurried respiration; and no doubt this explains the benefit of active walking exercise, in cases of congested or torpid liver, at which time the liver is compressed between the diaphragm and the respiratory part or upper half of the abdominal parietes. I would here ask you to observe the effect of *forced rest*, or the absence of the pressure upon the liver, in cases of accident necessitating the recumbent position, inducing congestion of the liver and jaundice, and possibly inflammation of the organ. For example: we see a patient in good health suddenly placed upon his back by a fracture of the leg, the local injury being confined most exactly to the leg. The fracture goes on well, but the patient in a few days is jaundiced, without much constitutional disturbance. A moderate diet and a few doses of blue-pill with saline purgatives soon dispose of the jaundice, and thenceforward everything proceeds healthily. I believe the congested liver, which leads to the jaundice, results from the forced rest to which the liver is subjected by the recumbent position; the circulation through the organ up to the period of the accident having been aided by active respiration and ordinary exercise. The withdrawal of these aids leads to congestion of the liver, and thence to jaundice. In other cases the congested liver may terminate in inflammatory softening and abscess. The same kind of congestion of the lungs at their bases and posterior obtuse margins may, and frequently does, take place under the influence of difficult and inefficient inspiration, dependent upon the difficulty of moving the posterior parietes of the chest while the patient is in the horizontal posture. The circulation through those parts of the lungs is not completed; and as the quantity of blood circulating, up to the period of the accident, was adapted to a free and complete respiration, this want of balance between the area of the respiration and the quantity of blood circulating causes pulmonary congestion and pneumonia. We see this fact exemplified when the patient is compelled to lie on one side, which, by interfering with the mobility of the thoracic parietes of that side, causes congestive pneumonia on that side only. I have repeatedly observed this one-sided pneumonia at the post-mortem table associated with lateral posture of the patient during life. The duty of the surgeon is to reduce the quantity of the circulating fluid by purgatives and diaphoretics, and to allow the patient to sit, if practicable, so that the chest may be as little as possible encumbered by position. No doubt it was the fatal effects upon the lungs and liver, which local and remote accidents seemed to produce, which induced our forefathers to "let blood" in almost every kind of accident which compelled the patient to keep quiet, or in bed.

The spleen has a strong elastic capsule, and also an internal network of highly elastic tissue, so that the interior of the organ may, when necessary, be compressed, and its gorged condition reduced to comparative emptiness.

The kidneys also possess a strong elastic capsule, for the same purpose, and are also subjected to pressure by the weight of the superimpose colon.

The tunica albuginea, which surrounds the testicle, tends in like manner to empty the organ, and to give it rest.

The lungs are extremely elastic; this elastic property aiding, without muscular force, the return of the lung to a state of rest or quietude after full inspirations which fill the lungs with air. I may here remark, that it is proved by the preparations before me, that the lungs have a very definite form, which adapts them, in their extremest healthy distension, to the surrounding structures, without encroaching upon any of them. So we find the lung specially grooved or hollowed out, to allow the cavæ, descending aorta, arteria innominata, and left subclavian artery to pursue their courses without hindrance. I would ask the physician to ascertain what modification of form results from emphysema of the lungs, and what is the effect of this altered form upon the heart, &c.[*]

One of the largest and the most remarkable excavations noticeable on the right lung is found at the base of the middle lobe. This excavation corresponds with, or receives, the right side of the right auricle of the heart; so that the right auricle, when distended with blood, as it frequently is, would, but for this, be pressed upon by the base of the wedge-shaped mass of lung, which is termed the third lobe. Another advantage of this arrangement is, that the right auricle, thus distended, exerts its mechanical influence upon a small portion of lung, which yields, and permits its distension. It is probable that this fact constitutes one of the reasons for the existence of a third lobe in the right lung; and it is worthy of this additional remark, that this third lobe is wedge-shaped (a mechanical form seldom employed in the construction of the human body), and that this wedge-force is the most powerful mechanical force which can be employed; and being interposed between the upper and lower lobe is competent to separate them from each other, and from the middle mediastinum containing the heart, &c. The preparation which I now present to you, demonstrates the anatomical relation of the right auricle and the base of the middle lobe of the right lung which I have just described.

---

[*] The following is the plan I adopted successfully, more than twenty years ago, for the purpose of injecting the human lungs so as to display the exact configuration of their surfaces:—

Remove the lungs and trachea carefully from the body without any laceration of their structures; suspend the lungs in a pail or small tub (large enough to allow of their full expansion), containing water sufficiently hot to maintain melted tallow in a fluid state; introduce a large tube into the trachea, and pour warm fluid tallow slowly through the tube until the lungs appear full, then leave them for a short time submerged in the water, hot enough to keep the tallow within the lungs in a state of fluidity. The air in the cells of the lungs will gradually rise and find its way out through the tube in the trachea, thus making space for the introduction of more melted tallow. This method of proceeding must be repeated at intervals in the same slow and gentle manner until the whole interior of the lungs and trachea is filled with fluid tallow. The lungs are then to be immersed in tepid, and subsequently in cold, water, until the tallow becomes quite firm. Preparations in this manner can be preserved during many years.

Quitting this digression regarding the surface anatomy of the lungs, I would observe, that if the views which I have advanced in relation to Nature's expedients to procure mechanical rest be true in their anatomy and sound in their physiology, as applied to the thoracic and abdominal viscera, they must be also true of the brain; and this suggests the intention of the interstices between the convolutions and other sinuosities and spaces on the surface of the cerebrum, and opens up the probable reason for the existence and position of the ventricles of the brain.

One of the purposes of the lateral ventricles is to allow room for the accumulation of venous blood in the plexus choroides during a state of general cerebral congestion as in sustained inspiration,—the cerebro-spinal fluid within the ventricle supporting the bloodvessels, and so preventing their rupture. Mr. Quekett tells me that any attempt to inject the plexus choroides, except in a fluid medium, is sure to cause rupture of the bloodvessels.

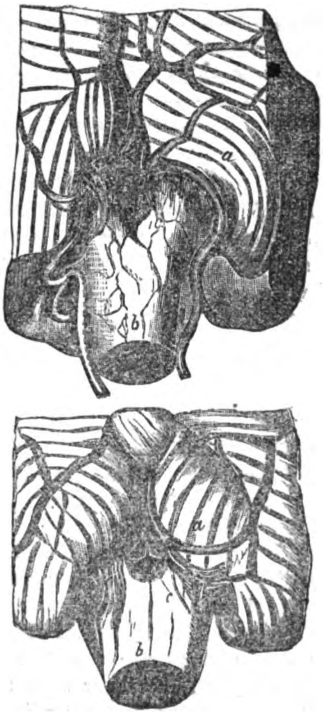
In order to point out the parallelism, in this respect, between the mechanical appliances made use of in the cerebral circulation, and the like influence in these capsular organs within the chest and abdomen, let us consider the relation of some of the deep, enclosed, and internal parts of the collection or aggregation of organs forming the brain.

For instance, the corpus striatum and thalamus opticus are placed within the cerebrum, and project into the lateral ventricles; these parts, with the island of Reil, which occupies the space between the anterior and middle lobes of the cerebrum, superintend the movement and sensibility of the upper and lower extremities.

The completed brain, being enclosed within a solid case with unyielding walls, admits of no possibility of eccentric enlargement; and if parts or organs liable to excessive or enduring function were placed within and surrounded by solid brain, they could not enlarge, except by pressure or encroachment upon some other parts, without creating mischief; they could not, in fact, be obedient to the general principle in physiology which I have mentioned.

This increase of dimensions of the parts forming the floor of the lateral ventricles, however, is permitted towards the interior of the ventricles, by the cerebro-spinal fluid receding through the foramina of Monro, third ventricle, aqueduct of Sylvius, fourth ventricle, and thence through the cerebro-spinal opening in the lower part of the fourth ventricle to the base of the brain or subcerebral spaces, and so into the vertebral canal. And as the local hyperæmia of the bloodvessels in the interior of the organs, thalamus, corpus striatum, &c., subsides, the cerebro-spinal fluid rises into the ventricles, and makes properly adapted pressure upon the corpus striatum and thalamus, reducing them to their size of inactivity, and sustaining them in a state of rest. Properly adapted pressure is the pressure of the circulation, *minus* the local effect of physiological excitation in the part actively employed; the cerebro-spinal fluid in this respect serving the analogous purpose of the elastic capsule of the liver, kidney, and spleen.

These sketches, copied from drawings made from nature, are introduced for the purpose of showing the position of the cerebro-spinal opening in the human brain through which the cerebro-spinal fluid passes to and from the interior of the brain. The size and outline of the cerebro-spinal opening varies in different brains.



a Posterior and inferior part of the cerebellum overlying the medulla oblongata.
b Upper and posterior part of the medulla oblongata.
c Cerebro-spinal opening for the transmission of the cerebro-spinal fluid.

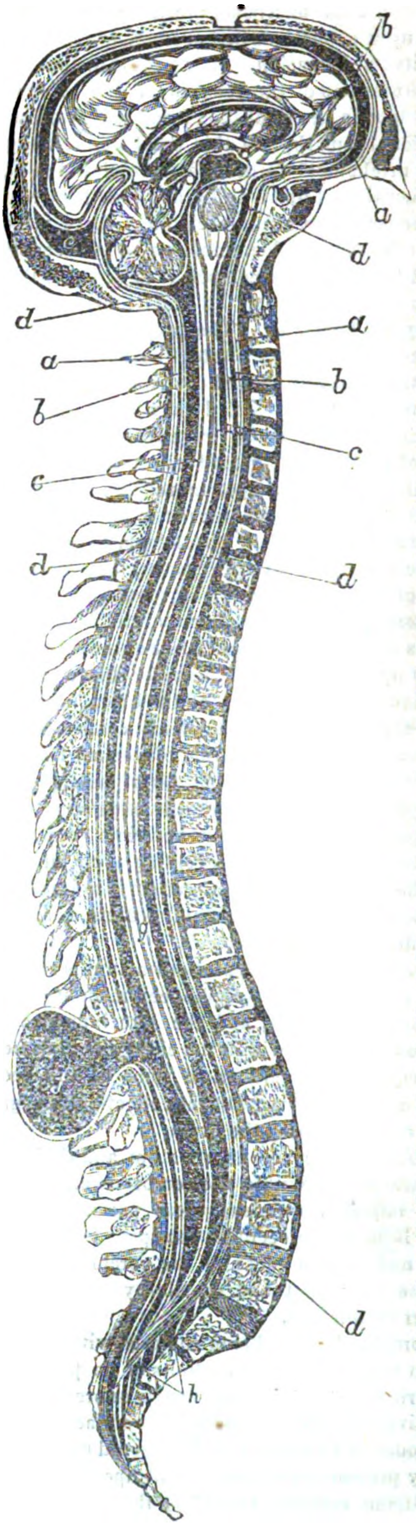
LECTURE II.

Mr. President and Gentlemen.—Towards the conclusion of the last lecture I was endeavouring to place before you illustrations of the mechanical means employed by nature to reduce organs to the proportions natural to their state of rest or quiescence after they have been in a state of physiological excitation or turgescence—i. e., performing their appropriate functions. The examples to which I particularly referred were selected from the liver, the spleen, the testicle, and other organs; and I was on the point of proceeding to show that if this principle were true in its anatomy and sound in its physiology, as applied to these organs, it must of necessity be true as regards the brain itself. And I purpose to-day to place before you the facts which seem to sustain that opinion. I shall endeavor to prove to you that the cerebro-spinal fluid performs, in relation to the circulation of the brain, the same functions that the elastic capsules of these different organs perform in reference to their own structures. The diagram before you, as you will observe, is a median section of the bones of the head and of the whole length of the vertebral canal; and within it we find placed the brain, the spinal marrow, and the membranes which are described as investing the spinal marrow. I shall be compelled to detain you with some details of the anatomy, with which you are familiar, but my so doing constitutes a necessary step to my attempting to show you how this compensatory action of the cerebro-spinal fluid is produced.

The letter *a* indicates the dura mater, which, you will observe, lines the whole interior of the cranium, and, after forming the tentorium, pursues its course down to the lower part of the vertebral canal, terminating in a conical point about opposite the second bone of the sacrum. A considerable space exists between the vertebræ and the dura mater, so that the interval admits of expansion or eccentric dilatation. I must direct your attention to certain lines (letter *h*) which are introduced for the purpose of localizing a piece of anatomy which I think has not hitherto received its proper attention. These lines represent natural ligaments, which proceed from the anterior inferior part of the dura mater, become fixed seriatim to the bodies of the sacrum, and pass downwards nearly as far as the first bone of the coccyx. Quitting the dura mater, you will notice that the letter *b* is intended to point to the external arachnoid, composed of two layers. If we trace the black intermediate space upwards from the vertebral canal into the interior of the skull, we find that it corresponds to the space between the interior of the cranial portion of the dura mater and the surface of the cerebrum. Now, the external arachnoid, which is a serous membrane complete in itself, is formed of two layers; one layer lines the internal aspect of the dura mater, and gives it its smooth character, and the other, in the cranium, rests upon the pia mater of the brain.

Let us now trace the continuity of this external arachnoid downwards into the vertebral canal. Here you may notice its linear continuity lining the internal aspect of the dura mater, and proceeding downwards to the lower part of the dura mater, which contains the spinal marrow. This external arachnoid is here seen, again, composed of two layers: its external layer, which lines the internal aspect of the dura mater, and the internal layer, which is blended with the external layer of what I should denominate the internal arachnoid, to

FIG. 3.



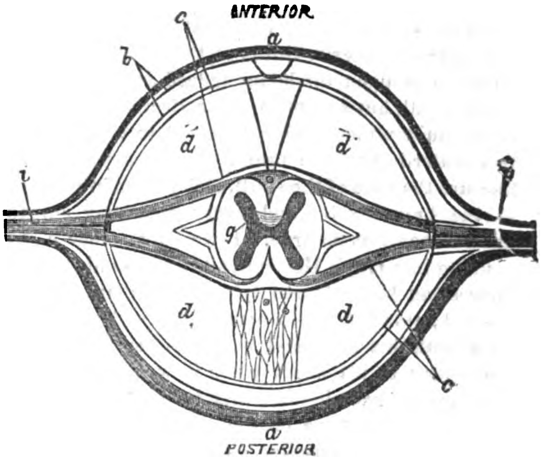
a, Dura mater. *b*, External arachnoid. *c*, Internal arachnoid. *d*, Space occupied by cerebro-spinal fluid. *e*, Torcular Herophili. *f*, Spina bifida tumour. *g*, Spinal marrow closely invested by pia mater. *h*, Separate ligaments fixing the anterior parts of dura mater to the second, third, fourth, and fifth portions of sacrum. (There are other delicate ligaments passing separately from the posterior part of the dura mater to the arches of the sacrum and lumbar vertebræ, but not shown in this sketch. The considerable space which exists naturally between the dura mater and the vertebræ, occupied by the rachidian veins and areolar tissue, is also omitted.) *i*, In the transverse section, indicates the position of the spinal nerves entering their dura-matral sheath. The posterior half of the dura mater is accurately represented as much thicker than the anterior half; its structure is more dense and more elastic.

which I will presently direct your attention. This external arachnoid contains, naturally, only a very small quantity of serous or albuminous fluid; and I suppose the function of this external arachnoid is simply to pour out a small quantity of fluid or halitus intended to lubricate these two surfaces of the external arachnoid during the movements of the brain,—these movements being, as you well know, two; one, under the influence of the arterial circulation, derived directly from the impulse of the heart; and the other depending upon the occurrence of any difficulty in the transmission of venous blood through the lungs from the right to the left side of the heart. This obstruction leads to congestion of all the smaller veins tributary to the large veins which enter the chest,—and therefore, amongst others, to the internal jugulars, which return the blood from the brain and from the interior of the skull. The ill effects of undue friction under these two circumstances are prevented by the small quantity of fluid which occupies the external arachnoid. The letter *c* points to what I should denominate the internal arachnoid, and it is this internal arachnoid which contains the cerebro-spinal fluid, and which proceeds to the *interior* of the brain through the cerebro-spinal opening, and then lines all the ventricles of the brain, and their different intermediate passages —all excepting the fifth ventricle.

The existence of this cerebro-spinal aperture underneath the cerebellum, and between the cerebellum and the medulla oblongata, is perhaps not universally admitted; but I believe, beyond all doubt, that the normal arrangement of structures is, that there should be such an aperture. Some years ago I took a great deal of trouble for the purpose of ascertaining this point in a very exact manner; and in no one instance, except where there were abnormal collections of fluid in the interior of the brain, did I find this aperture wanting; or in other words, in every brain which I examined, except cases of disease, I found there was such an aperture there, freely allowing fluid to pass inwards and outwards from the interior of the brain. I shall hereafter have the opportunity of laying before you some cases in which this aperture was closed, producing, in truth, internal hydrocephalus.

This diagram (Fig. 3) does not pretend to explain the exact and minute distribution of the internal arachnoid membrane, but only the general arrangement which obtains at the base of the brain. If we trace the outer layer of the internal arachnoid upwards and forwards, as far as about opposite the fissure of Sylvius, it there becomes reflected upon itself, and lines the under surface of the brain, crura cerebri, pons Varolii, medulla oblongata, &c. Tracing this membrane (the internal arachnoid) posteriorly, its posterior layer passes underneath the cerebellum, joined to the internal layer of the external arachnoid; it then quits the external arachnoid, and follows the under surface of the cerebellum until it reaches the cerebro-spinal opening, which it enters. You notice, therefore, that this large space (*d*), which I now term the internal arachnoid cavity, and which contains the cerebro-spinal fluid, not only passes down the whole length of the vertebral canal, (the relative position is here indicated in this diagram,) but the fluid lies under and supports the cerebellum, as well as the most important parts of the base of the brain; and it further passes upwards into the interior of the brain, and is the fluid which we generally find after death, occupying to a smaller or a larger extent the various ventricles of the brain. So that, in truth, the central parts of the base of the brain, instead of resting upon the bones of the skull at its base, rest upon this collection of cerebro-spinal fluid, which forms for it a most beautiful, efficient, and perfectly adapted water-bed; the water-bed itself being sustained in its position by the force of the venous circulation,—as I will prove to you presently, —and also by the elasticity of the dura mater in the vertebral canal.

Fig. 4.



And here, Sir, I would direct your attention to the diagram which represents a transverse section of the spinal marrow, and the membranes associated with it. In this diagram the same letters are employed to indicate the same membranes and spaces as in the larger diagram representing the vertical section.

For the purpose of pointing out the practical application of these anatomical facts regarding the function of the cerebro-spinal fluid in its relation to the base of the brain, I might say that almost the only part of the base of the brain which fits in close coaptation with the bones of the skull, is the inferior part of the anterior lobe of the cerebrum, where it rests upon the orbital plates of the frontal bones. So accurate is this coaptation, that if you were to make a cast of the interior of this portion of the skull, and compare the model from it with the under surface of that part of the brain which naturally occupies this position, you would find them in exact correspondence. But if, on the other hand, you examine these two models which I have placed before you for the purpose of illustrating this point, you will find that one of them is an exact outline and configuration of the various parts which form the base of the brain; the other model is simply a wax cast of the interior of the same skull, deprived of the brain. Now if the base of the brain rested upon the base of the skull, the wax model which is taken from the interior of the skull ought to give a cast exactly corresponding with the base of the brain. But we see that this is not so, and the great difference marks the extent of the interval occupied by the cerebro-spinal fluid.* We here have a complete demonstration that there is not a coaptation or exact fitting between the under surface, or base of the brain, and those bones which form the base of the skull; thus sustaining the opinion, that the two posterior thirds of the base of the brain do not rest upon the bones, indeed do not touch the bones at all, but rest upon this collection of cerebro-spinal fluid which I have ventured to call the perfect water-bed of the brain. Hence a person may fracture the base of the skull, and yet suffer no injury to the brain itself; and every observing surgeon knows that this is true. I well remember a man walking into Guy's Hospital, sitting upon his bedside, undressing himself, and lying down composedly in his bed; this patient, on his admission, had bleeding from both his ears, and he subsequently died from the injury to his head. when it was shown at the post-mortem examination that he had a very severe fracture of the base of the skull. Yet this man walked into the hospital, and showed no manifestation of loss of power or sensation in his legs, and no evidence of any encroachment upon those parts of the brain which form its base.

In February of last year I was requested to see, in the country, a gentleman who, coming home from hunting, was thrown from his horse, and got his foot entangled in the stirrup. In his fall he struck the back part of his head. After a time his horse was stopped; he disentangled his foot from the stirrup, and expressing himself somewhat confused, mounted his horse again, and rode several miles home. This gentleman occupied himself as usual during thirteen days, occasionally riding, sometimes walking, but more frequently driving about the country in the pursuit of his business and attending one of the public markets. He then became the patient of the surgeon who requested me to see him. At the time I saw him he was suffering from some indications of paralysis dependent on injury at the base of the skull, or high up in the cervical region. This patient subsequently died, and upon examining his skull it was found that he had been the subject of a fracture of its base; yet he pursued his ordinary avocation for thirteen days without the slightest evidence of any cerebral or brain lesion, complaining only of headache and some febrile condition. Now this fracture traversed that portion of the skull where the cerebro-spinal fluid is interposed between the bones of the skull and the brain structure. This is a good illustration; showing us that the brain is not actually in contact with the bones at that particular spot. And it shows us also that a man may have a fracture at the base of the skull without, at that time, manifesting any evidence of serious lesion. Supposing a patient to receive a severe blow at the back of the skull; which is the part of the brain most likely to suffer local lesion? Certainly not that part of the brain which lies immediately under the point which was struck; but experience points distinctly to the anterior inferior part of the brain as most prone to local injury; and in the anatomical fact to which I just now alluded we shall see the explanation of that circumstance. This is the part of the brain which rests accurately upon, and in complete surface coaptation with, the bones of the skull; and when the blow is received at the posterior part of the skull, the whole mass of the brain being driven forwards from the momentum given to it by the blow upon the bones of the skull, the under surface of the anterior part of the brain rubs over the depressed and elevated surfaces which constitute the anatomical features of the anterior division of the internal base of the skull. And here I place you a drawing which shows the point very distinctly. You will observe that the under and anterior part of the brain is very much lacerated. In this case the blow which led to the fatal injury was received at the back of the skull; no injury is inflicted upon the corresponding part of the brain, but the whole effect is propagated to its anterior part—that part which fits accurately upon the bones of the skull. These circumstances taken together will show, I think, the practical advantage of distinguishing the parts of the brain which fit accurately upon the skull from those parts which are separated from it by the interposition of the cerebro-spinal fluid.

The cerebro-spinal fluid has a specific gravity of about 1007. It contains scarcely any albumen, and is, therefore, very distinct from the serum of the blood. The function of this cerebro-spinal fluid is chiefly mechanical—that is, first, to protect the more important parts of the brain against vibratory communications from the bones of the skull which might otherwise reach them. Therefore the brain at its base does not rest upon the bones, but upon the fluid. Secondly, this fluid isolates the various nerves passing near each other towards the same foramina; and, lastly, supported by the cerebral circulation, it tends to bring back these internal organs of the brain to a state of comparative emptiness or quiescence after their state of activity. In this latter respect the cerebro-spinal fluid may be said to be performing for the parts in the interior of the brain a function analogous to that capsular apparatus to which I have already referred as investing some of the thoracic and abdominal viscera.

Now, to elucidate the office of this cerebro-spinal fluid as a mechanical support to the internal parts of the brain, when they have ceased to be in the condition of physiological excitement or turgescence. I have already said that the thalamus nervi optici and the corpus striatum, which occupy the base of the lateral ventricles, superintend the movements and sensibility of the upper and lower extremities; and I presume that when these functions are actively employed, these two parts especially are in a state of turgescence, and that if they were imbedded in the solid brain it would be impossible for them to enlarge without encroaching upon some of the adjoining structures, and thus inflict, at any rate, temporary injury. But the corpus striatum and thalamus nervi optici have a large extent of surface, which projects towards the interior of the lateral ventricles, and in proportion as they become enlarged by congestion they displace the cerebro-spinal fluid through the foramina of Munro, through the third ventricle, iter a tertio ad quartum ventriculum, into the fourth ventricle, and thence through the cerebro-spinal opening, and thus make a provision for the hyperæmia of the thalamus and corpus striatum. But when the physiological excitation ceases in the corpus striatum and thalamus nervi optici, then the cerebro-spinal fluid, supported by the venous circulation of the brain and the elasticity of the dura mater in the vertebral canal, drives the cerebro-spinal fluid up again through the same channels, and thus gives a mechanical support to the thalamus and corpus striatum in their state of repose. It is worthy of notice that these collections of fluid in what we term "the ventricles of the brain," communicate with each other through medium of very narrow passages; and I must not omit to call your attention to the point, that wherever these passages are narrowed, the brain structure itself or some structure added to that particular part, makes these narrowed parts very dense and strong for the purpose of resistance. At the margins of the foramina of Munro the structure of the brain is very dense, and the whole length of the iter a tertio ad quartum ventriculum is surrounded by a very dense material; and I suppose the reason for the existence of these narrowed openings is for the purpose of preventing a very sudden and rapid enlargement of the internal parts of the brain, in order that their turgescence may be slowly and steadily effected. So that, in truth, as the turgescence slowly and steadily proceeds, the cerebro-spinal fluid recedes through those various ventricles and contracted passages in an equal degree.

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* The models here referred to are in the Museum of Guy's Hospital.

I have now dilated on the fact that each of the internal parts of the brain is supported in a state of quiescence by the properly-adapted pressure of the cerebro-spinal fluid; that statement had reference to the equipoising influence of the cerebro-spinal fluid and the vascular circulation of the brain. But I must now place before you a few facts which show the exact relation between the venous circulation and the cerebro-spinal fluid, in order to prove that they equipoise each other. At an ordinary post-mortem examination, with the body lying upon its back, place a ligature tightly round the neck, so as to compress the jugular veins and prevent the venous blood running out of them. Then remove the thoracic and abdominal viscera, and divide transversely and neatly the various veins which escape from the vertebral canal, through the intervertebral foramina, and then lie upon the sides of the bodies of the vertebræ, taking care to leave these veins full of blood. Then take away the bodies of the third and fourth lumbar vertebræ, so as to expose the vertebral canal, with the dura mater, containing the spinal marrow arachnoid membranes, and the cerebro-spinal fluid. With a body so prepared, if the blood within the veins of the neck, be pressed upwards through the internal jugulars towards the interior of the head, it it will be seen that, just in proportion as you press the venous blood in that direction, so you will observe the dura mater rise into the place from which you have removed the lumbar vertebræ; thus showing that as you push the venous into the interior of the unyielding cranium, you displace the cerebro-spinal fluid, the evidence of that displacement being that you see the dura mater lifted up by it at the part where you have removed the two lumbar vertebræ. And so again, confining your attention to those veins which are in section on the side of the spine, and filled with blood coming from veins in the interior of the vertebral canal,—if you place the fingers upon the dura mater exposed by the removal of the bodies of the vertebræ, and make pressure upon it so as to displace the cerebro spinal fluid, you will observe that just in proportion as you displace the cerebro-spinal fluid will the blood rise within and then overflow the various divided veins to which I have alluded; thus showing that as you make pressure upon the cerebro-spinal fluid you displace venous blood from the veins which occupy the vertebral canal.

And here let me introduce an experiment bearing upon this subject, made upon a living body. I would not, however, advise a repetition of the experiment, because, probably, it involves a slight degree of risk to the patient. Some years ago I had in Guy's Hospital a patient suffering from fracture of the base of the skull, and from one of his ears was pretty constantly running a thin watery fluid. It occurred to me that if I could fill this patient's head more full of venous blood, I might succeed in displacing the cerebro-spinal fluid, and that, if the fracture had established an easy communication between the auditory canal and the cerebro-spinal fluid in the interior of the skull, I should be able to force out of the ear some of the cerebro spinal fluid. I accordingly went to his bedside and told him to take a very full breath; I then held his nose and lips, and put my fingers so as to compress his jugular veins on each side of his neck. His face became exceedingly congested and discolored, and he commenced struggling to get rid of the pressure of my hands upon his nose and mouth. This had scarcely taken place before a quantity of thin fluid came running out of the auditory canal, and I succeeded in collecting nearly half an ounce of it. The experiment was now completed; I removed my hands from the nose and mouth of the patient, and he quickly recovered his condition of repose. Thus, then, I had succeeded in displacing from the interior of the cranium a quantity of cerebro-spinal fluid (for so it afterwards proved to be by microscopical and chemical examination) by propelling to the interior of the skull an increased quantity of venous blood.

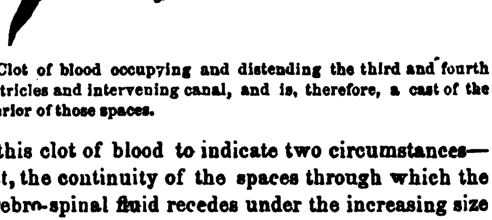
I think I have now proved a very close relation between the cerebro-spinal fluid and the venous circulation within the cranium and vertebral column and that, in truth, this cerebro-spinal fluid is, under ordinary circumstances, supported by the venous circulation of the brain and vertebral canal. I have also explained to you how this fluid communicates with the interior of the lateral ventricles, and I believe that when the turgescence of these internal parts of the brain (corpus striatum and thalamus) subsides, the cerebro-spinal fluid rises within the ventricles to occupy the space thus left by their subsidence.

It is a little wide of my proper subject, Sir, but whilst your attention was directed to the relation of this cerebro-spinal fluid to the interior of the brain, I thought it might not be altogether out of place if I were to remind you of the anatomical relation of the disease termed spina bifida to the internal arachnoid, so as to enable me to express the fact that the fluid contained in the interior of the cavity of a spina bifida is cerebro-spinal fluid.

The spina bifida is essentially the projection backwards, through the imperfect vertebral canal, of the membranes of the brain, and the thin fluid which occupies the spina bifida is in truth the cerebro-spinal fluid, (see Fig. 3, *f*;) and thus the interior of the spina bifida actually communicates with the interior of the brain through the medium of the cerebro-spinal opening between the medulla oblongata and the cerebellum. I have no intention of dwelling on the subject of spina bifida beyond availing myself of the freshness of this illustration for the purpose of pointing out the danger that is associated with operations upon this disease, especially the operation of injecting it with any irritating fluid. It is obvious that if any irritating fluid be injected into the cavity of the spina bifida, we are injecting a fluid into a cavity extending the whole length of the spine, and communicating directly with the interior of the brain; so that, although we may wish to limit the influence of the stimulating fluid to the spina bifida, it is impossible to prevent the extension of the mischief towards the interior of the brain. Illustrations of the fatal effects of this method of proceeding I have myself witnessed. So again in the operation of ligature upon the spina bifida as a means of cure. If the patient dies of inflammation of the membrane of the spinal marrow, that inflammation is manifested almost exclusively in the internal arachnoid, which contains the cerebro-spinal fluid; and if the mischief extends far enough, and the patient lives long enough, this mischief is actually traceable along the continuity of this internal arachnoid to the interior of the brain. This effect of the ligature I have seen several times. I might also point out that this anatmony, as exemplified by the diagram (Fig. 3) suggests the impropriety of at any one time drawing off the whole of the fluid from the spina bifida. Surgeons know very well that it has happened that when the fluid has been drawn off from the spina bifida as long as it would flow, it ceased only with the patient having a fit—a sort of general epileptic fit—and of that fit perhaps the patient has died. That occurrence receives an explanation when we trace a communication between the interior of the brain and skull and the spina bifida, for it is plain that as you draw off the fluid from the spina bifida so you withdraw the whole of the cerebro-spinal fluid from the interior of the brain and from the base of the brain; all the veins become congested and distended with blood, the interior parts of the brain encroach and make pressure upon each other, the various nerves at the base of the brain, including the pneumogastric, are compressed, and the patient dies from the defective respiration or from a struggling or epileptic fit—the direct effect of the withdrawal of all the fluid, as is sometimes done in the operation upon spina bifida. Now the safest and best method of proceeding, no doubt, is to take away only so much fluid as will relieve the spina bifida of its state of tension; then the patient runs no immediate risk from the operation. The removal of extreme tension from the walls of the spina bifida enables those walls to recover themselves, and to produce in time good and healthy skin, which forms the best natural defence to this unnatural projection of the membranes backwards through the defective vertebral canal. After this tapping operation, the skin ought to be supported by the local application of a thick layer of collodion and by a bandage.

The diagram to which I am now directing your attention is made from a drawing representing a clot of blood which I found in a patient's brain, in the year 1842. You know that sudden deaths used to be most frequently attributed, erroneously no doubt, to apoplexy, but it has rarely occurred to any person to have the opportunity of seeing a case of apoplexy, where the death was so sudden as in the patient from whom this clot of blood was taken. This patient dropped down dead upon the floor of the room of a public-house in which she had been drinking, and I subsequently examined the body, when I found that the cause of the sudden death was the clot of blood, the outline of which is given in the diagram, the clot itself being upon the table. I avail myself of this clot of blood to indicate two circumstances—first, the continuity of the spaces through which the cerebro-spinal fluid recedes under the increasing size of the corpus striatum and the thalamus; and secondly, to show that the pressure which led to this patient's death, was made upon the fourth ventricle, which contains the origins of the pneumogastric nerves. Running the eye along the upper part of

Fig. 5.



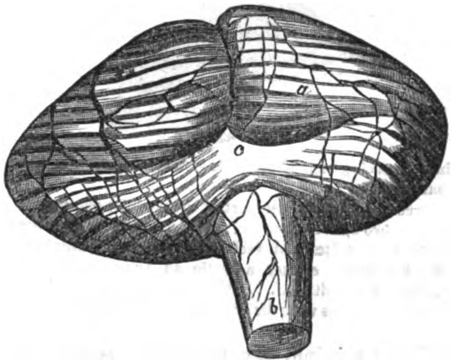
Clot of blood occupying and distending the third and fourth ventricles and intervening canal, and is, therefore, a cast of the interior of those spaces.

the clot, from before backwards, we notice a semicircular notch, (*e*,) which corresponded exactly with the anterior commissure of the cerebrum in the third ventricle. A little further back is a peculiarly configurated depression, (*d*,) which is the impression of the commissura mollis. And at the interior and inferior part is a nipple-like projection downwards, (*f*,) which fitted into the tuber cinereum of the third ventricle. The narrow prolongation backwards (*b*) is a cast of the iter a tertio ad quartum ventriculum passing under the corpora quadrigemina, and joined to this lozenge-shaped mass, (*c*,) having a prolongation downwards, which passed through the cerebro-spinal opening and two lateral wing-like expansions, which were adapted to the lateral recesses of the fourth ventricle, where the trunks of the pneumogastric nerves are placed; it is, in truth, a perfect cast of the fourth ventricle. A clot of blood is only a portion of the blood, because the blood, as we know, is made up of that which clots and that which does not clot. The unclotted portion is not here; but notwithstanding its absence, this clot of blood alone forms a cast of the interior of the fourth ventricle, so that there must have been, in this case, great pressure upon the floor of the fourth ventricle, at the origins of the pneumogastric nerves, which superintend the process of respiration. The sudden death was produced by the blood which had been extravasated into the lateral ventricles having pursued the course of the cerebro-spinal fluid, and rested in the fourth ventricle, and there made so much pressure upon the roots of the pneumogastric nerves as to completely paralyse them; and if the process of respiration could not be continued, as it certainly could not during the time the pneumogastrics were thus pressed upon by the clot of blood, the patient would necessarily quickly die. This I apprehend, then, is the explanation of the sudden death of the patient. And the clot of blood, which was quite entire, will also establish the fact of the continuity of these various parts, through which, I have undertaken to suggest to you, the cerebro-spinal fluid passes to and fro, according to the state of congestion of the interior of the brain.

I might here remark, that it appears to me impossible that any patient can live with what is called a diffused external hydrocephalus, assuming that the external hydrocephalic fluid is placed within the external arachnoid. As the brain is of a greater specific gravity than the hydrocephalic fluid, it would of necessity sink upon the internal base of the skull, or if it did not sink from its own weight, it would be compelled to do so by the hydrocephalic fluid swimming over the top of the brain, and thus pressing the brain upon the base of the skull. You will remember that the arteries of the brain contain the blood, through the medium of which the brain is nourished and manifests its functions; that those arteries lie between the under surface of the brain and the bones of the skull, and if this hydrocephalic fluid press the brain downwards, it must compress the bloodvessels between itself and the bones of the skull, and in that way the supply of blood to the brain would be cut off. So again, if the base of the brain were thus pressed downwards, the pneumogastric nerves would also be compressed, and the respiration would cease. Now it has never fallen to my lot to see a case of diffused—mark, I say diffused—external hydrocephalus, and, therefore, I presume the cases must be rare; and I apprehend that in the examples recorded, they must have resulted from rupture of the internal arachnoid membrane, which allowed the cerebro-spinal fluid to escape from it, and flow over the top of the brain, thus leading to sudden death

Before quitting this subject of cerebro-spinal fluid and the cerebro-spinal aperture, I must call your attention to this drawing, which represents a specimen of the occlusion or shutting up of this cerebro-spinal opening. In such instances the cerebro-spinal fluid could not escape from the interior of the brain; and thus the collection of fluid within the brain would constitute internal hydrocephalus. And here I may add that the drawings from which the diagrams were copied represent specimens of morbid anatomy which I removed from little children who had been the subjects of internal hydrocephalus; and the occlusion of the opening was the only cause of the internal hydrocephalus that I could discover.

FIG. 6.



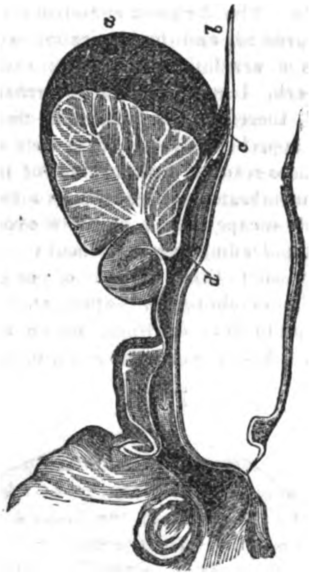
Drawing of a specimen of occlusion of the cerebro-spinal opening, taken from a child who died in 1844 from internal hydrocephalus.

a, Cerebellum. *b*, Medulla oblongata, upper and posterior parts. *c*, This letter is placed a little above the cerebro-spinal opening, which is completely closed by dense membranous adhesions.

This other drawing is taken from the preparation, but represents a longitudinal section of it, which enables us to see the extremely dilated state of the third and fourth ventricles, and the point of closure of the cerebro-spinal opening.

These drawings have been in my possession a long time—ever since 1844. At that period of my professional life I was examining the diseases of the brain in children, and in almost every case of internal hydrocephalus which I examined after death, I found that this cerebro-spinal aperture was so blocked up—so completely closed—that no cerebro-spinal fluid could escape from the interior of the brain; and as the fluid was being constantly secreted, it necessarily accumulated there, and the occlusion

FIG. 7.



This engraving represents a *longitudinal* section of the same brain.

a, Cerebellum. *b*, Upper part of the medulla oblongata. *c*, Cerebro-spinal opening. the occluding membrane seen in longitudinal section. *d*, Fourth ventricle, much dilated. *e*, Iter a tertio ad quartum ventriculum, much dilated. Both these cavities and the other ventricles were distended by hydrocephalic fluid.

formed, to my mind, the essential pathological element of internal hydrocephalus.

Internal hydrocephalus is not an unfrequent companion to spina bifida, and in many cases of that disease that I have examined after death the cerebro-spinal opening was closed, thus explaining how it happened that although the spina bifida had been tapped during life, and no limit put to the flow of the fluid at the operation, yet the little patient did not suffer cerebral congestion. Indeed it was a case of this kind which first made me acquainted with the pathological fact of closure of the cerebro-spinal opening in the fourth ventricle.

I will now detail to you the short particulars of a case of internal hydrocephalus in which the cerebro-spinal canal was closed at the iter a tertio ad quartum ventriculum. This case of internal hydrocephalus I saw in the year 1847, with Mr. Otway, a surgeon at Kennington :—

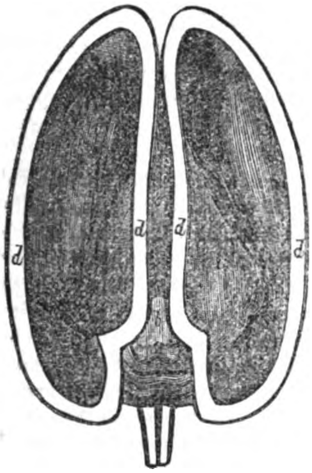
A.H——, a child of unhealthy parents, very thin, feeble, and sickly from birth, uttering constantly a peculiarly distressing cry, and having a remarkable rotary movement of the head. When four months old, the head began to enlarge rapidly; and after this had been noticed a week, the infant became comatose, lying perfectly quiet, almost paralytic, with strabismus and dilated pupils; her skin was of a dingy-yellow tint; pulse scarcely to be felt: respiration extremely imperfect, both as regards frequency and extent. After the coma had continued twenty-four hours, as death appeared imminent, the anterior fontanelle was punctured by a trocar and canula, and eight ounces of colorless fluid escaped. While the fluid was being drawn off, the infant began to kick vigorously, the eyelids opened, the strabismus ceased, and the pupils contracted. So that the withdrawal of the cerebro-spinal fluid removed the pressure from the third nerve, which had produced strabismus; from the optic nerves and their commissures, which had been the cause of the dilated pupils; it removed the pressure also from the thalamus and corpus striatum: and this freedom from pressure was manifested by the child moving its limbs vigorously. The lips began to move constantly, especially the lower lip, which had been drawn inwards between the gums. When the finger was introduced into the mouth of the infant, an attempt to suck was made, and a little warm milk and water was swallowed without difficulty. The pulse was about 140, very small and feeble; respiration very irregular; the surface was cold and clammy, but warm applications soon restored its temperature. Moderate pressure was applied to the head. A week after the first operation, after some slight fits, the child became comatose again, and unable to swallow. Eight ounces of turbid fluid were again drawn off, with the same result as before. And three weeks later, the same quantity of fluid, highly coagulable by heat (inflammatory effusion, not cerebro-spinal fluid), was again evacuated under similar circumstances. During the next two months, the child took mercury and chalk, in small doses, with some benefit. The bones of the head were gradually becoming approximated, and the anterior fontanelle was diminished. The child was emaciated, although it took the breast freely. The thumbs were turned in upon the palms of the hands, and the peculiar movement of the lips continued. The child died on the 30th of October, having had convulsions of increasing severity during four days; but it continued to suck, and took notice of surrounding objects, till the day before its death. The child lived nearly three months after the first tapping. I did not see this patient alive, but I suspected, from Mr. Otway's description of the case to myself, that we should find closure of the cerebro-spinal canal.

Post-mortem examination.—Body much emaciated. The bones of the head overlapped each other considerably; the anterior fontanelle was imperfectly felt. There were cellular adhesions between the two layers of the external arachnoid; this membrane was much thickened, and in some places opaque. There was no appearance of cicatrices in the position of the trocar punctures, but some firm adhesions existed at that spot. The veins on the surface of the brain were distended, and a dirty brownish-red discoloration, from altered blood, was noticed between the lobes of the cerebrum. Within the right lateral ventricle three distinct cicatrices were clearly seen, corresponding with the punctures made during life with the trocar. Each lateral ventricle was divided in an exactly similar manner by an opaque structure (resembling its lining membrane), in which there was on each side an aperture of about a quarter of an inch in diameter. This was either a new false membrane developed within the ventricular cavity, or the lining of the roof of the ventricle, thickened and subsequently ruptured, so as to allow the fluid to make its way between it and the ventricular wall: most probably the former of these conjectures is the correct one. The lateral ventricles were distended, and contained four ounces of fluid. The plexus choroides was not to be recognised. The septum lucidum was elongated, its ventricle was enlarged and contained fluid. The cavity of the tuber cinereum was dilated, and so compressed the optic commissure, explaining the dilated pupils and the impairment of vision. The iter a tertio ad quartum ventriculum was dilated nearly as far as the entrance into the fourth ventricle, where it was closed by old and firm adhesion. This occlusion necessarily preserved the fourth ventricle from dilatation, and it was accordingly natural in form. The olfactory nerves, as far as their bulbs, were hollow, and communicated with the anterior cornua of the lateral ventricles—the persistence of a condition normal to about the fourth month of intra-uterine life, suggesting that the hydrocephalus, with its pathological cause, had commenced during the period of intra-uterine life.

LECTURE III.

Mr. President and Gentlemen,—Some difference of opinion may exist amongst anatomists as to whether there is a well-defined membrane within the lateral and other ventricles of the human brain. I do not wish to express my opinion authoritatively, but I will adduce this model of the fœtal brain in support of the fact that there must be a firm and compact membrane lining the interior of the ventricles during the early period of intra-uterine life, when the brain itself is in a semi-fluid or diffluent state. The drawing was made from a model of the brain of a fœtus at about the fourth month; it shows accurately the relative position and size of the lateral ventricles and their walls. The diffluent rudimentary brain-structure is placed between the pia mater externally and the internal arachnoid membrane internally. The internal arachnoid contains the cerebro-spinal fluid, and the pia mater deposits the semi-fluid brain between the internal arachnoid and its own internal surface. It appears to me that if there did not exist a well-defined membranous wall on each side of the semi-fluid brain-matter, it would be impossible for the brain to grow and to sustain itself in anything like a definite form. Indeed, it strikes me that the cerebro-spinal fluid contained within the internal arachnoid performs the very important office of supporting the membrane, and thus constitutes a scaffolding or internal arch upon which the pia mater deposits the fluid brain-matter, which is ultimately formed into more firm brain-structure. This mechanical function of the cerebro spinal fluid may be aided by gravitation, and possibly this may be one of the reasons why the head of the fœtus occupies a depending position within the uterus.

Fig. 8.



a, Lateral ventricles, of normal size, containing cerebro-spinal fluid. b, Corpora quadrigemina, not yet complete. c, Corpus callosum. d, Semi-fluid brain-structure, lying between the pia mater externally and internal arachnoid internally.

I will not dwell longer on this subject, but I felt it necessary to advance these facts in confirmation of the belief of there being a lining membrane to the ventricles, even at a very early period of fœtal life.

I said the other day that I should be prepared to detail another case of occlusion of the cerebro-spinal aperture, and one of considerable interest. I think that the case will be more instructive, and its value better exemplified, if I read the post-mortem examination first, and then allude to the symptoms observed during life.

The gentleman who was the subject of this disease died at the age of thirty-four. On the day of his death he had visited the Crystal Palace. He had been seized with vomiting in the morning, and again about two hours before he had reached home. He walked from the Crystal Palace, (a mile or so), and when he entered the house he staggered, and said he felt giddy and oppressed. He was placed on a bed and cold was applied to his forehead, but he died in a very short time, with stertorous breathing—sensible, however, to the last moment. I examined the body, assisted by Dr. Wilks, of Guy's Hospital, and this is the report of the post-mortem examination:—

"Cadaveric decomposition was advanced, except within the brain, which presented in this respect a remarkable contrast to the other parts of the body. The convolutions of the cerebrum were large, and their surfaces flattened by pressure from within."

And these convolutions were few, rather suggesting, perhaps, that the condition of the brain was a persistent state of a very early development of the convolutions; for although the person was full grown, and thirty-four years of age, the convolutions were large and few. That is very much in accordance with the character of the convolutions of the brain when it is arrested in its ordinary progressive development.

"The brain-structure was healthy, neither it nor the membrane containing any tubercular deposit. On carefully opening the lateral ventricles, they were found to contain at least four ounces of clear cerebro-spinal fluid."

Regarding the character of this fluid there can be no doubt. It was carefully examined. Its specific gravity was 1008, and it possessed all the microscopic and chemical characters of cerebro-spinal fluid.

"The ventricles were greatly enlarged, and all the receding and projecting angles of their boundaries and cornua were lost or subdued. The foramina of Munro were rounded, and capable of admitting a large quill not quite a third of an inch in diameter. The lining membrane of the ventricle and the choroid plexus were healthy. The septum lucidum and the fornix were softened, but the microscope showed no trace of inflammatory deposit or softening. The fourth ventricle was greatly dilated in all its directions, showing well its lateral cornua which support the pneumogastric, auditory, and other accompanying nerves. The cerebro-spinal opening between the under surface of the cerebellum and the upper surface of the medulla oblongata was completely closed by a tolerably dense membranous structure, which formed a kind of pouch projecting downwards, and showed the direction of the fluid tension upon it to have been from above to below."

The pathological condition (closure of the cerebro-spinal opening) found in this gentleman's brain is well represented by Fig. 6, *c*, but that drawing was made in 1844, from a preparation which I then obtained from the head of a child who had died of internal hydrocephalus.

"This was clearly seen when looked at either from the ventricular aspect or below from the spinal aspect. The arachnoid in the neighborhood, at the base of the brain, was somewhat opaque and thicker than natural. The large trunks of the cerebral arteries presented a few minute spots of opaque deposit. The veins of Galen and their tributaries were healthy. The heart was healthy, both as regards its muscular tissue and its valves. There was slight deposit beneath the lining membrane of the aorta. There was no recent disease of the lungs."

The details of the history during life apparently present a perfect fitting-in of the symptoms to the pathological anatomy; but I wish it to be understood that this account has not been "cooked," as it is termed—that the history has not been made up for the purpose of agreeing with the facts as previously stated, because it is drawn up by the brother of the gentleman himself, who is not a professional man. I asked him to oblige me with a detail of the symptoms which his brother presented during life, and this is his account of them:—

"This gentleman always had delicate health. The nails of his fingers were peculiar in form, the last phalanges being very short, and the nails inserted like two seeds into the cuticle."

I stop at this point to remark that here we have evidence apparently of a congenital error in the development of the ends of the fingers, and this leads me rather to the conclusion that probably the cerebral error, or this occlusion of the cerebro-spinal aperture, was also congenital.

"As a child, he was active and wiry, but very irascible in temper. As a man, he was very spare and delicate-looking. [All indications of a something which has impeded healthy development.] He had always some color in his cheeks, which he retained till within a year of his death. He had a fondness for intellectual pursuits; also for turning light fancy work, and gardening; and a great dislike to the excitement, and especially the noise, of London. Indeed at the age of sixteen he had a severe nervous illness, with great depression, brought on by application to business in the city; it ought, however, to be mentioned that his business was not at all intense, and nothing would have been thought of it by ordinary men."

Now this is worthy of note, because in this instance there was no possibility of the cerebro-spinal fluid escaping from the interior of the brain; so that whatever pressure might be made, by mental occupation or physical exertion, upon the internal parts of the brain or the medulla oblongata, would be morbidly manifested, in consequence of there being no possibility of escape for the cerebro-spinal fluid. Or put it in another way: Suppose there to be, by over-exertion or any moral influence, an excessive accumulation of blood in the head, there was no possibility, in this instance, of its insuring a proportionate escape of cerebro-spinal fluid, because there was no aperture to allow of it.

"His food was always of the simplest kind. Even tea, coffee, and cocoa seemed to affect his head and derange his stomach; and he had an instinctive dislike to alcoholic stimulants of every kind. Though subject to coldness of the extremities he could not bear a warm room, as it made him feel faint. Both winter and cold always affected him injuriously. He said himself he only half lived in the winter; he seemed torpid, and would drop into a deep sleep after a meal, from which it was often difficult to rouse him at bedtime, when he seemed scarcely to know where he was. Excitement frequently brought on an impediment in his speech. For many years he was subject to headache, derangement of stomach, and occasional deafness."

We have here a most important and valuable living experiment, if we may so term it. Here is a man who cannot bear any accumulation of blood in his brain, because there is no possibility for the compensatory fluid to escape, from the pressure or state of congestion of the organs of the interior of the skull. I conclude that we find the cause of the stomach affection in the great distension of the fourth ventricle, and consequent pressure upon the pneumogastric nerves at its floor; and the cause of the deafness in the pressure upon the auditory nerves as they take their courses outwards between the corpus restiforme and the cerebullum; for if this fourth ventricle be filled with fluid, it must exert for the time some pressure upon the auditory nerve, thus explaining the temporary deafness.

"His pulse was usually extremely weak, irregular, and slow, from 50 to 60 beats per minute. He was thought to be suffering from heart disease. A peculiar restless, uneasy look of the eyes and stare, with dilated pupils, and a muddiness of the conjunctivæ, afforded a ready indication of any temporary derangement of his health. For the last year of his life, he was gradually losing flesh; he became more feeble, too, and acquired a slight stoop in his gait. He also carried his head peculiarly, as if affected with slight stiffness of the neck." [This is the way in which hydrocephalic patients carry their heads.]

"A few months before his death, while in the country, he had a severe attack of vomiting, with great prostration, without any apparent cause. The last month or two were marked by a morbid activity and restlessness. Amongst other things, he became greatly excited about the preparation for a scientific meeting; and this was followed by great prostration and collapse. On the day of his death he had been to the Crystal Palace. He had had some vomiting in the morning, and again about two hours before he reached home. He walked from the Crystal Palace, and when he entered the room he staggered, and said he felt giddy and oppressed. He was placed on a bed, and cold was applied to his forehead; but he died in a short time with stertorous breathing (indicating pressure upon the medulla oblongata,) but was sensible almost to the last moment."

If I were to select this opportunity to enlarge upon the apposite circumstances of this case, perhaps I might extend it too widely. I will merely observe that I think it an important and interesting experiment in reference to the circulation through the brain, the administration of food and stimulants, and various other matters. His brain could bear no fulness of blood, no increase of size, because the cerebro-spinal fluid could not escape from the interior of the brain. He could take no wine, no beer, nor spirit; and could bear no muscular exertion. The congestion of the brain produced vomiting by pressure upon the medulla oblongata, and so exerting its influence upon the pneumogastric nerve. He died from pressure upon the medulla oblongata, with stertorous breathing—that pressure which could not be obviated. I shall dwell no longer upon this case, nor this kind of case, but I think that occlusion of the cerebro-spinal opening is a pathological condition which has not received due attention from the profession.

Before quitting the subject of the circulation through the brain, let me say that I think that it is generally supposed that during sleep the brain is in a state of congestion, or, rather, overcharged with blood; and that it is the pressure of that blood which in some measure induces or sustains the state of repose or cerebral quietude. Mr. Durham, one of our demonstrators at Guy's Hospital, has put into my hand this paper, containing the result of some experiments which tend to show that the brain is not in that condition during sleep; that it loses its congested character in order that it may assume what we should call its state of quiescence, or rest. The facts are very few, and they shall be allowed to speak for themselves.

"A dog having been chloroformed, a portion of bone, about as large as a sixpence, was removed from the parietal region of the skull by means of the trephine; the subjacent dura mater was cut away, and the surface of the brain exposed. As long as the animal continued under the influence of the chloroform, the smaller vessels of the pia mater were turgid with dark-colored blood, and the larger veins were considerably distended. No difference in color between the arteries and veins could be recognised. The exposed portion of the brain manifested a tendency to rise into the opening through the skull. By and bye the immediate effect of the chloroform passed off, and the animal sank into a comparatively natural and healthy sleep. A very marked change in the appearance of the brain accompanied this change in the state of the animal. As sleep supervened, the vessels gradually emptied themselves; the veins ceased to attract notice by their distension; the exposed surface of the brain sank down to, or below, the level of the opening, and became pale in color. In the course of a short time the animal was roused, and irritated. A blush seemed to start on the surface of the brain; the vessels of the pia mater became fuller and fuller, and of a bright arterial hue. The contrast between the appearance of the brain during this state of functional excitement and the previous state of quiescence was most striking. The more the animal was excited, the fuller of blood did its brain appear to become, and the higher did the exposed portion rise above the general level. When the animal was allowed to return to its state of repose, the brain again sank down, and reassumed its pale aspect. A full account of these and other confirmatory experiments and observations will be read at the British Association meeting at Oxford."

I have thus far dwelt upon the subject of rest almost exclusively in its relation as a physiological agent, and attempted to show how important a feature its production appears to have formed in Nature's plan of development and sustained health. This I have felt to be necessary as introductory to the consideration of rest as a therapeutic agent.

Mr. Prescott Hewett, my preceding colleague, has dwelt so largely and so comprehensively on the subject of injuries to the head, that I am almost ashamed even to appear in the neighborhood, except as an admirer, of the monument which he has raised to himself. I would, however, solicit the attention of the profession to what observation has taught me—that recognised lesions of the brain and its membranes, associated with blows upon the head, (whether the cranium be fractured or not,) do not generally, or as a principle of treatment, obtain the extent of mechanical rest and long-continued freedom from occupation which is consistent with the expectation of perfect and complete structural repair; and that this error in the treatment of such cases is one of the chief sources of the brain and membranous diseases which we meet with in practice. I must also claim your indulgence to employ a very short time in reference to the subject of what we term concussion of the brain or spinal marrow, for the purpose of indicating the value of rest with respect to injuries of those parts when they have been in a state of concussion.

If a man receives a severe blow upon the head which produces symptoms of compression of the brain, we at once admit the cause is sufficient, and has produced the symptoms; and as long as these symptoms continue, we are disposed to think that the cause or its effects continue. Let us apply the same kind of reasoning to the subject of concussion of the brain. I have here one or two drawings, to which I have before alluded, showing clearly that a patient may die with symptoms only of concussion of the brain; yet the real cause of death may be laceration of the brain. But another cause of death with symptoms of concussion will occasionally be found. For instance, a patient has had a severe blow upon the top of the head, and dies; and yet no structural lesion, no cause of death is found at the post-mortem examination. But I suspect that, if in such cases the base of the brain be carefully examined, the cause of death may be discovered in injury to the filaments of the pneumogastric nerve, near their origin from the medulla oblongata. Some years ago, I clearly made out this lesion in a case of concussion which caused the patient's death; the only indication of local mischief which I could discover was laceration of some of the filaments of the pneumogastric nerve.

In concussion of the brain, as soon as the blow which strikes the skull has caused the symptoms of concussion, the physical disturbance of the brain, whatever it may be, has been produced, and the continuance of the symptoms must depend on the continuance of the structural or molecular disturbance. But the actual condition of the brain is not known, and, as far as I am aware, has received no clear explanation. Experience shows that the symptoms may last a long or a short time, varying from days to weeks. If you make the inquiry as to what is the pathological condition of the brain in a state of concussion, I believe there is no satisfactory answer to be given; but the generally received opinion is that it results from disturbance of the vascular system of the brain. I cannot conceive it possible that a long continuance of these symptoms of concussion can depend upon any temporary error of that kind; I think it must depend upon something more intimately associated with the structure of the brain itself. The most appropriate physiological term for concussion of the brain is, perhaps, "collapse," or "shock." employing that term as we employ it in cases of local injury to the exterior of the body in which the structures are not destroyed, but bruised or concussed; and that the function of the part is rendered very imperfect, is evidenced by the insensibility of the bruised skin, and its coldness or diminished temperature. These conditions of the integuments may continue for some time, but ultimately, without loss of structure or function, the recovery is complete, although it may be deferred to a considerable period after the accident. In the latter case of external bruise, before and until the recovery is complete, the surgeon secures as much rest as possible for the injured parts, not allowing them to be moved or stretched. Relying chiefly upon Nature's own efforts to repair the injury, he employs but slight means, which have reference at first to preventing the total death of the part—to helping, if need be, the reaction or return of function, and to anticipating the occurrence, or resisting the effects, of inflammation.

Now, I venture to think, with all due deference, that such considerations, applicable to external injury, ought to indicate the principles of treatment to be adopted in cases of concussion of the brain. No doubt our duty should lie in this: to give the brain absolute rest; to rely on natural reaction, or Nature's power to repair the injury or disturbance; to avoid stimulants as much as possible, which excite quick reaction, and have a great tendency to do mischief. I suppose there can scarcely be a more serious error committed by any surgeon who is attending a concussion of the brain than to hurry on reaction by excessive stimulation. Whatever the derangement of structure may be which coexists with this condition of concussion of the brain, the structure itself is undoubtedly deteriorated; and if that be over-stimulated through the medium of excitants, such as brandy and ammonia (sometimes given in unmeasured quantities), the whole tendency *must* be to do harm at the period of reaction. Should we employ stimulants in that reckless way in the case of external bruises? If not, then I see every reason why we should not adopt such a plan in the case of the more delicate and highly vascular structure, the brain. Let us keep down any excessive temperature by the local application of ice, avoiding animal food, except milk in a definite quantity.

I make no pretensions to anything new in this statement. It is only a simple mode of considering such cases, and is, I believe, the true interpretation of what may be required to guide us in our principles of treatment of concussion of the brain. Such a disturbed brain is defective, if not in structure, certainly in its vital endowments, and is therefore unequal even to its ordinary duties. It recovers itself slowly; it then soon becomes fatigued from use; and if claims are made upon it too soon after the injury—that is, before the structural and physiological integrity is re-acquired—the patient is very likely to suffer from serious disease of the brain. Cerebral exercise or mental occupation should always be in such cases short of fatigue. The brain requires absence from occupation, or *rest*, for its complete recovery, and this should be in proportion to the severity and duration of the symptoms of concussion: in fact, the length of time which has has been required by Nature for the repair of the injury must be in proportion to the severity of the local injury; and the more severe the injury, the longer the time required for the perfect recovery of the functions of the brain.

The intention of this remark is to secure due and continued rest to a brain which has suffered concussion, and to avoid the too early return to occupation, which leads, or may lead, to more obvious and serious chronic lesions, such as mental aberration, softening, chronic inflammation, extravasation of blood, &c. All here stated is analogous to what is observed in collapsed or bruised parts upon the exterior of the body. Thus, when those external parts have apparently recovered from the immediate effect of local injury, they are likely, if too early or too much used, to become painful,—suggestive of rest,—and to assume a chronic inflammatory condition, resulting in local thickening or ulceration. The surgeon ought to guard most circumspectly the brain in this state of concussion. He ought to keep it under his professional surveillance and protection during its prolonged convalescence, because the brain, not manifesting its disturbance by pain, does not give the same warning to the patient against use, nor by such marked indications, as do injuries to external parts, which express their derangement by pain.

Every experienced surgeon will support the opinion that a great many of the chronic brain affections which he meets with in practice are the result of local injury—perhaps a transient shake of the brain, slight or severe blows, or a fall upon the head, the immediate effects of which having passed off quickly, may have been almost forgotten; or of a sudden rebound or recoil of the brain, as in railway collisions—a condition of confusion produced for a short time, and then thought of no more. So, again, it often happens that we hear of sudden deaths occurring some long time after concussion of the brain. I would then suggest that we ought to consider a brain which has been subjected to concussion as a bruised brain, not necessarily accompanied by laceration of brain or extravasation of blood, but as having suffered molecular disturbance in its exquisitely delicate structure, this structure having a function attached to it requiring molecular perfection to enable its fine endowments to be made manifest. In cases of injury to what may be called the coarser structures with more simple functions attached to them, we see that if the structures be not perfectly restored their functions are not efficiently performed. We notice that such soft parts having simple functions require weeks or months, or longer, for their complete repair; so that we ought not, I think, to deny the necessary and proportionately much longer time for the repair of the more delicate brain tissues—a repair, be it remembered, which cannot be accomplished by any direct aid from the surgeon, but only by Nature herself employing her chief agent and most faithful servant—Rest. I believe that if this principle be adopted by surgeons generally, and the plan carried out, we shall not witness so many chronic diseases of the brain.

I have thought it right to make these brief observations in reference to concussion of the brain. I will now add a few words respecting concussion of the spinal marrow—a condition, I think, more frequent than formerly, (probably in relation to the prevailing kind of railway accident.) in which a patient may experience slight and temporary numbness, or inability to control his legs and arms. I will put a case of concussion of the spinal marrow before you thus:—

A gentleman falls, without violence, with his back upon the hard ground or soft turf. There is no mental confusion, no cerebral disturbance. He feels a transient, peculiar sensation—called pins and needles—in his hands and feet; he gets up, walks or rides home: feels little or no inconvenience; makes arrangements for the morrow; but in the morning is unable to get up, because, he says, he is in pain all over; he feels sore and stiff, just as if he had been bruised, making it painful for him to move his limbs.

Now, can this be a disturbed circulation? I really believe not. What has happened in this case? It is possible that the spinal marrow obeying the law of gravitation, may, as the body falls, precipitate itself in that direction—may fall backwards towards the arches of the vertebræ, and be itself concussed in that way: or the little filaments of the sensitive and motor nerves, which are delicately attached to the spinal marrow, may, for a moment, be put in a state of extreme tension, because, as they pass through the intervertebral foramina, they are fixed there by the dura mater; and if the spinal marrow be dragged from them, the intermediate parts must necessarily be put upon the stretch, producing at the time the "pins-and needles sensation," and explaining the symptoms felt on the following day. He has not caught cold; has no rheumatism; nor has he been bruised. The stiffness which he feels is not the result of the local injury. He has received no blow where the pain is experienced. No such explanation will apply. These symptoms must all depend upon something which occurred when he fell. Has he stretched the trunks of the nerves, or the little filaments forming the roots of the nerves? or has the spinal marrow itself suffered molecular disturbance? No doubt that sensitiveness of the surface, which creates pain on being touched, and the stiffness which he experiences, are the result of something which has disturbed the sensitive and motor nerves conjointly or individually, if one function be disturbed and not the other; or the mischief may have occurred in the interior of the spinal marrow. It is impossible that these symptoms could be the result of anything but some such structural disturbance; and they are, to my mind, the evidence of decided injury to the nerves or marrow, although what that injury may be is not ascertainable. So it is when the spinal marrow has been impaired by a blow, or direct force: by a shake or to-and-fro motion (as occurs in railway collisions), in which the marrow is at least efficiently defended from external injury by the mechanical contrivance employed in the construction of the vertebral column. The deterioration of function which follows such accidents must be the effect of some kind of structural disturbance, for it occurs immediately after the blow. It is a shock to the spinal marrow; at least, that is the most reasonable light in which to consider it, especially with regard to proper treatment.

The object here should be to give the marrow rest from occupation by not allowing the patient to take walking exercise at all; or if at all, the exercise should be short of fatigue, and certainly he should not be advised to endeavor to "walk off" his condition. There seems to be an impression in the minds of the non-professional public that if a man receives a concussion of his brain or spinal marrow, or has a fall which gives him these sensations, the best plan is to "run it off." A little while ago I had occasion to see a gentleman in the country who had a fall upon his back at Epsom a few years since. The accident occurred from some scaffolding giving way. When he fell, he experienced the sensation of pins and needles in his legs. He was a most energetic man, and he set off and ran six miles. When a boy, he had been told that if he ever had an accident of that kind he should run it off as quickly as possible. Within a very short time he began to have spinal marrow symptoms, which have resulted in complete and irremediable paraplegia. I firmly believe that if, upon receiving the injury, he had gone home, and kept himself quiet and the spinal marrow unused for a considerable period, he would have been well at this time. It was a great error to adopt the course he did. It is this misdirection, this misuse of early exercise after a shock to the spinal marrow, that leads to more serious mischief—to chronic inflammation or softening of the marrow, which probably remains incurable.

It has occurred to me to see many such cases of concussion of the spinal marrow, and some of the patients have been thought to be malingerers. For example: a patient who has suffered such a concussion continues his active exercise, takes no rest at all, or perhaps, after two or three weeks of rest, he may begin to resume his ordinary duties, but with some little difficulty in walking. It is observed that in a few days, or a week or two, the legs become feeble; there is a little jumping of the legs at night on going off to sleep, some sense of coldness in the limbs, slight dulness of sensation on the surface of one or both limbs, or of parts of one or both limbs. Then, perhaps, he is ordered by the surgeon to increase his exercise, so as to overcome the effect of disuse, especially if he is thought to be a malingerer. This adds to the exhaustion of the spinal marrow, and the plan, if persevered in, most probably leads to paraplegia.

The confirmation of the accuracy and applicability of these views is, I think, made apparent when it is added, that all these morbid effects of concussion of the spinal marrow are to be prevented, relieved, or cured by due and long-continued rest.

I do not mean to aver that the experiment to which I shall now allude proves our capability of exhausting physiologically the function of that part of the spinal marrow which is in direct continuity with the centres of the brain, and which is associated with the performance of progression; but it does demonstrate our power of exhausting the true spinal marrow, or excito-motory function. A person receives a fracture of the spine, which involves destruction of continuity of the spinal marrow in the dorsal region, leaving a portion of the spinal marrow perfect below the line of severance. If you tickle his feet, you excite involuntary movements in the lower extremities, through that excito-motory function which is apparently dependent upon the grey matter in the centre of the spinal marrow. You continue to excite by this means the movements in the muscles of the toe, foot, or leg, for some time, and you mention the patient's case to some other person, and ask him to go and see a specimen of excito-motory function. He goes immediately to the patient, tries the experiment, but it fails; he cannot excite motion. You see the patient again in a few hours, or on the following day, and perform the experiment successfully. The movements are visible, continue for a short time, and then cease; on the next day, perhaps, they reappear. Here, then, we have evidence that by over-excitation, which is equivalent to fatigue, we exhaust or destroy for a time the true spinal marrow function; and I accept the result of the experiment as an indication that by over-exertion, after concussion of the spinal marrow, we may injure it by requiring it to do more than it is competent to accomplish without fatigue.

The obvious intention of these remarks is to suggest that in cases of concussion of the spinal marrow by accident, it should have more rest than is usually allotted to it, in order that it may not suffer physiological exhaustion by premature and too vigorous exertion before its structures shall have repaired themselves. Experience points distinctly to this recommendation and conclusion; since we observe that after many months, or a year or two, such patients recover perfectly. On the other hand, recovery is sometimes rendered incomplete by persistent loss of sensation or wasting of some part; and this persistent loss, I apprehend, has reference to some distinct defect of structure in some minute filaments either of the spinal marrow or the nerves themselves.

I thought I could hardly pass over the subject of concussion of the spinal marrow without adducing these few observations, which I think have an important bearing on the function of the spinal marrow, and manifest the necessity for keeping it in a state of rest after accident; and I trust also that these remarks will have a tendency to promote improved treatment of such forms of concussion, the further consideration of which I now leave.

A few weeks ago a surgeon from the country came to my house with a patient. He said, "I want to consult you about a young lady who has a diseased toe. It has been very troublesome, and I have not succeeded in completely relieving her." With her was an elderly gentleman, a relative of the patient, a very kind-hearted man, and he thinks he is a good surgeon, and goes about doctoring the people, sometimes doing harm, and sometimes perhaps a great deal of good. He is very fond of animals, and has a number of pets. After I had examined, with the surgeon, the lady's toe, the elderly gentleman said, "Well, Mr. Hilton, what are you going to do to cure this young friend of mine?" I said, "I think we shall put a splint on the foot and keep the toe very quiet, attend to her general health, and Nature, in all probability, will do the rest." I then said to him, "What led you to adopt the occupation of a philanthropic surgeon in addition to your other occupation?"

"Well, Mr. Hilton," he replied, "I will tell you. You know I am very fond of animals. Some years ago I caught a live mouse in a trap. I took it in my hand, and I said to myself, 'Poor thing! you must have suffered a good deal of pain and distress. You have had a severe laceration of your cheek; one of your eyes has been torn out; your skull has been broken, and instead of having bone covering your brain you have now only a thick dense membrane defending it.' Then I thought to myself, 'This mouse must have had difficulties in its treatment of its injuries; and'"——interrupting the relation of his story, he said, "I hope you won't be offended at what I am going to say?" "No," said I, "not in the least." "Well," he continued, "I said to myself, 'Surely this mouse, although it is cured, never had a physician or a surgeon!' I quite agree with you, Mr. Hilton, that Nature is a very valuable surgeon."

It would be well, Sir, I think, if the surgeon would inscribe upon his memory, as the first professional thought which should accompany him in the course of his daily occupation, this physiological truth—that Nature has a constant tendency to repair the injuries to which she may have been subjected, whether those injuries be the result of fatigue or exhaustion, or inflammation, or of accident; and that this reparative power becomes at once most conspicuous when the disturbing cause has been removed; thus presenting to the consideration of the physician and surgeon a constantly recurring and sound principle to guide him in his professional practice.

I will employ illustrations of simple surgery in this matter. An extraneous body falls upon the conjunctiva; it is immediately grasped by the orbicularis palpebrarum, and gradually pushed, by repeated involuntary closure of the eyelids, towards the angle of the eye, close to and below the puncta lachrymalia; thence the lachrymal fluid floats it upon the caruncula lachrymalis, where it becomes entangled by the hairs with which this structure is provided. So long as the extraneous body remains upon the conjunctiva, the redness, pain, &c., continue; but after its removal by the surgeon or nature, the whole of the inflammatory appearance vanishes, showing that it was only necessary to remove the disturbing cause. So if there be a thorn in the finger, you have but to take it out and the local irritation subsides. Or suppose you have a fish bone in the throat, exciting constant involuntary effects of deglutition,—as soon as it is removed all the disturbance in the throat ceases. So with an inverted toe nail which is producing great pain and local inflammation: if you take off the edge of the nail, all these symptoms quickly vanish. Corns get well if pressure be taken from them. I admit that this is all very simple rudimentary surgery, but it illustrates a principle—that if the local disturbing or exciting cause, whatever it be, is removed, Nature has an immediate tendency to repair the injury which has been inflicted, because she is enabled to adopt her own remedy, rest.

This subject at first sight may appear to have but small application in practice, especially when looked at through the biased vision of those who think that in the treatment of disease or accident everything is to be done by medical or surgical aid; but I feel convinced that, however high may be our scientific acquirements, however deep and minute our researches into the phenomena of disease, however great our experience, even should it have been carried to the perfection of human skill in the treatment of every form of disease, each and every one of us, if candid and truthful, will admit that he has not the power of directly adding one single atom to the living tissue. Under the most favorable circumstances, all that any of us can accomplish in this direction is to give rest to the parts, and enable Nature, through her own efforts, steadily to pursue her inherited destiny, whilst we, as Nature's willing servants, act in the hope that, by the use of appropriate mechanical applications, aided, if necessary, by soothing medicines, and by the use of properly-adapted diet, we may facilitate her efforts to repair the injury she may have sustained. So, in fact, nearly all our best-considered operations are done for the purpose of making it possible to keep the structures at rest, or freeing Nature from the disturbing cause which was exhausting her powers, or making her repeated attempts at repair unavailing. The operation does not cure; it only makes recovery possible, where, without the aid of the hand or head of the surgeon, Nature would have ceased her competition with the results of the injury, or succumbed to the exhausting influence of unmitigated disease. In aneurism—I think I am not in error when I say that aneurism is cured by rest, and not by the surgeon. The surgeon takes care to stop the blood or to moderate its flow; the disease is actually cured by Nature herself—by rest. So in all operations for hernia, the object is to give the intestine rest and freedom from pressure, both immediately after, and for a long time subsequently to, the operation. Most of us now act upon this principle. We take care not only not to disturb the intestine by purgatives, but we give opium to arrest peristaltic action. We know that the gut has been damaged in its function and structure, and will not bear excitement; that it requires rest and quiet to enable it to repair itself. Sometimes we carry this so far at Guy's Hospital, that one of my colleagues Mr. Birkett, mentioned to me that in a case of operation for strangulated hernia, the bowels had not been opened up to the twenty-first day, and the question was asked, "What shall I do? Shall I give anything to the patient?" The reply was, "I think not;" and in the afternoon of the same day the bowels were well relieved. In chronic laryngitis, cured by tracheotomy, the cure is not effected by opening the larynx, but by giving the larynx rest. The operation is performed in reference to these two circumstances—in reference first, no doubt, to securing the continuance of life by allowing the patient to breathe through the tracheal tube; secondly and ulteriorly, the object is to give rest to the diseased part. In the performance of tracheotomy for disease of the larynx, the surgeon never touches the disease at all; he merely enables the patient to breathe through the tracheal tube, and to divert the stream of air away from the larynx, thus giving the larynx the opportunity of recovering itself. It is marvellous to see what happens in a few hours after the trachea has been freely opened in cases of traumatic injury to the top of the larynx, such as occurs from the accidental local application of scalding water.

And here I might remark upon the striking difference in the successful results of tracheotomy in cases of traumatic injury to the upper part of the larynx, as compared with the want of success of the operation in cases of diphtheria or croup. In the latter cases the patient may have a tube introduced into the trachea, and may breathe through it for a considerable time, yet the diseased condition of the larynx remains, and is fatal, from some zymotic cause still existing. It is not like the simple effect of a local injury: the seat of the local injury being kept quiet, the inflammation subsides, and the larynx rapidly recovers; whilst in the other case of diphtheria, whatever may be its cause, it still persists. Hence tracheotomy has not been successful as a curative operation in such cases.

I have here the sketch of a patient upon whom I performed the operation of tracheotomy twelve or thirteen years ago, to prevent suffocation from syphilitic ulceration of the larynx. She has lived by breathing through the tube ever since, scarcely any respiration going on through the upper part of the larynx. At one time the air which passed through it was not sufficient to bend the flame of a candle. I need scarcely add, the voice is totally lost, but she is not disposed to have any further operation performed in reference to clearing the upper part of the larynx, and the tube is still worn in the trachea.

So, again, if a portion of bone be pressed in upon the skull, you have only to remove it and give the brain rest, and the brain will repair itself. It is not the operation that cures the injury to the organ, but by removing the disturbing cause the brain recovers itself. I might allude, also, in the same spirit, to the operation of lithotomy. Stone is not the disease, although it is the cause of the symptoms. The patient does not complain of stone, but of the pain and irritation which the calculus induces within the bladder. So that if a patient has a stone in his bladder it does not necessarily follow that an operation should be performed. The same symptoms are sometimes produced when there is no stone at all. Perhaps you have a little ulceration of the bladder or prostate, with all the indications of stone. No surgeon can tell whether it is stone or not till he has explored the bladder. Those are the symptoms complained of, and by removing the stone you simply make it possible for these symptoms to be subdued by giving the parts rest. I have a gentleman under my observation who has had stone in the bladder during many years, probably for more than twelve years. I discovered the stone ten years since. He is seventy-four years old, and the only inconvenience he experiences is occasional and slight hæmorrhage from the bladder. He is always relieved by maintaining the recumbent posture. Having recently treated him for nasal polypi, I asked him, "How is the other affair?" "Oh," said he, "I have nothing the matter there, as far as I know; I am quite well." Stone, then, is a disease requiring operation because it induces a derangement of the structure which produces certain painful symptoms, and by removing the cause the part gets well—first, through the assistance of the surgeon, but ultimately through the medium of nature.

Original Papers.

ON ALLARTON'S OPERATION FOR STONE IN THE BLADDER.

By Barnard Holt, Esq., F.R.C.S.,

Surgeon to the Westminster Hospital, etc.

Mr. Allarton's operation for stone in the bladder having engaged the attention of operating surgeons, it behoves all those who have had an opportunity of performing it to record their experience of its results.

The main objections which have been *hitherto* urged against its performance have been in reference to the size of the stone and the enlargement of the prostate gland, the consequent difficulty of extraction, and the effect of forcible dilatation on the neck of the bladder. Having lately performed this operation three times, where these difficulties were prominent features in each case, I desire to record the results.

J. R——, a child aged eight years, was admitted into the Westminster Hospital under my care, April, 1860, suffering from stone in the bladder. The symptoms had existed for eight months prior to his admission, and consisted in difficulty and frequency of micturition, which required considerable straining to effect; occasional passage of bloody urine; and, but rarely, pain at the extremity of the penis. The boy having been placed under the influence of chloroform, a sound was passed to the neck of the bladder, where its further progress was arrested by some foreign body, which a slight amount of pressure sufficed to displace. The sound being thus fairly introduced, a stone was immediately detected, which, from the extent of surface traversed, appeared to be large.

I decided on performing Mr. Allarton's operation. On May 8th, while under chloroform, a staff as large as the urethra would admit was introduced, and the stone immediately detected. The child was now secured in the ordinary manner, and the forefinger of the left hand being passed into the rectum, the exact situation of the prostate was ascertained. A sharp-pointed and somewhat triangular knife was now thrust into the mesian line of the perinæum, with the back towards and about three lines in front of the anus, the finger in the rectum guiding the knife, and preventing its being wounded. An incision was now made directly upwards, and the groove of the staff cut into by opening the urethra immediately in front of the prostate; and the knife was now run backwards and forwards to a slight extent so that it might be fairly divided, the tegumentary opening being enlarged as much as appeared necessary in its withdrawal. The forefinger was now removed from the rectum, and passed into the wound, with the nail in the groove of the staff, which thus formed an accurate guide for the director, which, being made with a handle at right angles, was passed along the groove into the bladder. The assistant was now directed to pull the staff gently but firmly upwards towards the symphysis pubis, whilst I pulled the director gently downwards, and the forefinger of the left hand, being passed between these two instruments, was gently wormed between them with a twisting motion, dilating the parts as it proceeded until the neck of the bladder was reached, when both staff and director were withdrawn, and the dilatation was continued still further by rotating and moving the finger from side to side. The forceps were now introduced upon the finger, which was withdrawn as they passed into the bladder, so that to the present time no urine had escaped. The stone having been detected, the blades of the forceps were separated, when the gush of urine carried it between them, and with gentle traction it was removed. As was anticipated, it proved of considerable size, measuring two inches long and one inch wide, and weighing 240 grains; it was of the triple phosphate variety. The hæmorrhage was of the most trifling description, and beyond the smarting attendant upon a wound he hardly suffered anything. *There was no involuntary escape of urine* after the operation, but it was passed at will, for the first week through the wound, but afterwards per urethram. Eight days from the operation he was walking about the ward, and in a fortnight was discharged cured.

The second case occurred in a spare, feeble man, aged sixty-five, who had suffered from stone for four years prior to his admission. The urethra admitted a full-sized sound, and the prostate was perfectly healthy. The bladder was, however, considerably contracted, not holding more than four ounces of urine; and the stone, which was readily detected, was large and dense. The same proceedings were adopted as have been already described; but the stone, proving even larger than was anticipated, eluded the blades of the forceps. A large pair were consequently had recourse to, and the stone removed. It was found to measure two inches and a quarter long by one inch and a half in breadth, and weighed 570 grains. It was of the oxalate of lime variety, coated with phosphates. The patient was comfortable during the evening, and passed his urine at will. He was, however, seized in the morning with a rigor, and died suddenly.

The post-mortem was made twenty-eight hours after death, and the bladder having been removed, the incision was found to be exactly in front of the prostate. The bladder was now cut into, and the mucous membrane corresponding to the neck was found to be congested and slightly torn, not, however, extending into the prostate gland, and much less than is met with in the lateral operation. The kidneys were in an advanced stage of cystic disease; the heart fatty; but the other organs were healthy.

The third case occurred in my private practice, in the person of a gentleman aged seventy-five, of spare habit, who had suffered from diseased prostate more or less for the last eight years, during which time he had occasional hæmorrhage, sometimes slight, and sometimes sufficiently severe to call for the exhibition of gallic acid, the bleeding being at all times provoked by any extra walking or jolting exercise. Although there was no pain at the extremity of the penis after micturition, yet the symptoms to some extent simulated those of stone, and the bladder was from time to time carefully examined both by myself and others, without, however, detecting any foreign body. Early in 1859, while at his seat in the country, he was attacked with inflammation of the bladder, characterized by rigors, great frequency of micturition, spasms of a most violent character, and occasional pain at the extremity of the penis, the urine depositing the usual amount of muco-purulent, tenacious deposit. Suitable remedies were had recourse to, and in the course of three months he recovered; the spasms entirely subsided, the urine regained its healthy character, but the difficulty of expulsion had so far increased as to prevent his passing more than an ounce at a time. He was therefore directed to pass his own catheter three or four times in the day and night, which he accomplished without either difficulty or suffering. In the winter of 1859, being again in the country, he had another but more severe attack, which apparently arose from standing on damp ground, and it was evident, from a sudden discharge of pus and extreme tenderness of the prostate, that an abscess of that gland had formed and burst. His symptoms were now very distressing, the bladder much more irritable, and the pain at the extremity of the penis more decided; and being now unable to pass any urine naturally, he was compelled to rely entirely upon the catheter, which was passed every three hours. The bowels were daily relieved by enemata. The horizontal position was maintained, and all the known remedies had recourse to, belladonna, copaiba, and chlorodyne giving the greatest relief.

In the spring of the present year he was removed to town, the frequent and almost irresistible urgencies continuing, and the pain at the extremity of the penis being more acute. Opium, in the form of suppositories, was the only drug that now afforded the slightest relief.

On Sunday, June 15th, after violently straining at stool, the bladder became more than usually irritable; and being requested to pass his gum catheter, I immediately detected a calculus, rough, and so far as could be ascertained by such an instrument, not very large. A consultation with Mr. Arnott and Mr. Cæsar Hawkins was held; and as lithotrity offered no chances of relief, Allarton's operation was decided upon.

On June 27th he was placed under the influence of chloroform, and the operation, as already detailed, was performed. Not the slightest difficulty was experienced in reaching the neck of the bladder, but the size of the prostate prevented the interior being explored, or the stone being felt with the finger. The forceps were consequently substituted, and being buried to a considerable depth, a stone was caught and removed, proving large, smooth, and polished. Another was sought for and removed, which bore an accurate resemblance to the first. It was, therefore, evident there must be a third, which, after slight difficulty, was also included between the blades of the forceps, but being larger than either of the former ones, it required some little patience and gentle traction to remove it. The parts, however, yielded, and the third, somewhat roughened, stone was now abstracted. The first measured 1⅜ in. by 1½ in.; the second, 1⅜ in. by 1¾ in.; and the third, 1⅝ in. by 1½ in.; the weight of the three being 960 grains. The incision was insignificantly small; the hæmorrhage very trifling; and my patient being now placed in bed, shortly recovered from the effects of the chloroform, and simply complained of the slight smarting of the wound. The neck of the bladder retained its contractility, and there was not any involuntary escape. The suppository was introduced as usual; and, excepting when the urine was withdrawn, he slept tranquilly. For the first three days he progressed in the most favorable manner; the intervals were increased, the catheter being introduced every four, instead of every three, hours; the spasms were less frequent and less intense, and he was nearly relieved from the pain he had previously experienced when, on the fourth day, he was seized with rigors, extreme and urgent pain in the region of the stomach, vomiting, and his pulse, which was exceedingly weak, rose to 130; skin hot; countenance anxious; and the urine presenting an appearance of bloody jelly. Opium and stimulants were administered, the bladder was injected with tepid water, and he rallied. He, however, continued exceedingly ill for three or four days, when the attack gradually subsided, the urine became more natural, but the spasms of the bladder recurred; and fearing the possibility of a calculus having descended from the kidney, he was again examined, under the influence of chloroform, without however discovering any foreign body; a roughness was detected with the gum elastic catheter, but not with the sound, and in all probability depended upon a calcareous coating of some portion of the mucous membrane; indeed, this was subsequently ascertained to be the case, for, upon introducing a lithotrity spoon, a portion of gritty matter was removed, and eventually the corresponding mucous surface, coated with phosphates, came away in the eye of the catheter. Small particles of the same deposit have from time to time escaped. The frequency and spasms have now entirely subsided; he is enabled to pass per urethram from two to three ounces of urine; the bladder will retain from ten to twelve ounces; the wound has so far healed as to be hardly perceptible, and when necessary he can introduce his own catheter. The bowels, which have hitherto required enemata of water, have acted naturally since taking the confection of senna; and an examination per anum proves the prostate to be diminished in size. He is daily gaining flesh and strength, and when the weather will permit drives out.

The present cases have been described simply as examples to prove that large calculi and an enlarged prostate form no bar to the operation, and, as far as they go, establish the facility with which a large stone can be removed without injury to the neck of the bladder. It is true that the mortality is about the average; but as in the fatal case there was probably sufficient cause in the state of the kidneys and heart superadded to the rigor, from which persons in advanced years frequently die, I cannot consider it as in any manner militating against the operation.

The case of the boy was interesting in showing how circumstances may alter and modify symptoms generally relied upon as characteristic of stone. The pain at the extremity of the penis was the exception and not the rule, and evidently depending upon the stone generally occupying the same position and requiring to be displaced before the sound could be fairly introduced. The diagnosis was correct in reference to its size, which it must be admitted very far exceeded the average of such cases at such an age.

In the second case, the facility with which the stone was detected, and the ringing sound, afforded sufficient evidence of its size and density to preclude any advantage from lithotrity.

The third case must be considered as the most important of the three. The size of the prostate—which did not permit the finger to reach the bladder after the necessary incisions had been made, the long duration of the disease, the inability to pass any urine without the introduction of a catheter, the irritable state of the bladder, the emaciated condition of my patient, and the presence of three such very large calculi, were sufficient to test the operation to the utmost. I may mention that this gentleman had been subject to severe bilious attacks which very much resembled the one that supervened on the fourth day, and that the issue of the case proves the symptoms to have depended upon a deranged liver.

I have described the operation as it was performed; and although the precaution of introducing the finger between the director and the sound may not be absolutely necessary, yet I am convinced it simplifies the operation to such a degree that no surgeon of common intelligence need fear undertaking it. The extraction of the stone requires care and gentleness. A minute lost is a minute gained, if a large calculus can be removed through the neck of the bladder without injury; and I feel convinced this can always be effected if the necessary care is exercised. In almost all the descriptions of the ordinary forms of operating, the direction is, to have a large external wound. Such is not necessary; and if a stone can be removed, without bruising, through a moderate wound, it is certainly better than making a large one.

From all that I have yet seen of Mr. Allarton's operation, I consider it a most valuable one: the wound is less; the hæmorrhage is less; the constitutional disturbance is less: there is no chance of infiltration of urine; and, as a matter of comfort to the patient, the ability to retain the urine is of the utmost value and importance.

Parliament-street, Sept. 1860.

ON

FATAL EFFECTS ARISING FROM ENLARGEMENT OF THE THYMUS GLAND IN CHILDREN.

By Geo. S. Brent, L.S.A., London.

There has been brought under my notice, on several occasions, a fatal result from enlargement, or else non-absorption, of the thymus gland in young children. One of such instances occurred at Notting-dale, Kensington, in June last.

A child, two years and a half old, belonging to the laboring class, but well nourished, and altogether what might be termed a fine boy, died somewhat suddenly and quite unexpectedly on the 13th of June, at half-past six o'clock in the morning. The particulars of the illness and death of the child were but very imperfectly elicited. It was only ascertained that two days prior to the decease he was quite well; that on the day previously he suffered from sickness, of which not much notice was taken; and that on the next morning about three o'clock, still complaining of sickness, and in bed, he crawled away from the side of his mother, who about five o'clock sent for medical assistance. Whilst the messenger was gone, the child, as stated, had two convulsive fits, and then "went off." He had not previously appeared to suffer from any difficulty in breathing.

Mr. Hemming, of Norland-place, Notting-hill, the surgeon who had been called, followed the messenger to the house, and found the child dead, without any external indication of the cause of death. On his making a post-mortem examination, every organ in the body was found to present a natural and healthy appearance, except that the thymus gland was preternaturally large and vascular; it weighed an ounce and a quarter. The effect of this condition would probably be pressure on the adjacent nerves to such an extent as to irritate them, and occasion a spasm of the glottis, to which event the death in this instance was attributed.

On a former occasion, Mr. Hemming was called to a similar case, in which an enlarged thymus gland pressed upon the right recurrent nerve of the par vagum, and so appeared to have set up an irritation which resulted in spasm of the glottis and consequent death. In this case the child was erroneously supposed to have swallowed some hot water; such, however, was not proved to have been the cause of the decease. Dr. Hayne, of Camden-town, also, was the medical attendant called in a similar instance. He found in a child about twenty months old, who had died suddenly, a thymus gland weighing ten drachms, which specimen, given to me by him, I for a long time possessed, preserved in spirit. I have in several other instances recognised sudden deaths in children, apparently from a spasmodic closure of the glottis, to be coincident with a considerable enlargement of the thymus gland.

The thymus in the human subject increases in size very rapidly after the seventh month of fœtal life, and at birth at the full period has commonly varied (as stated in the "Cyclopædia of Anatomy and Physiology") from 84 to 240 grains in weight. At nine months afterwards, according to the same authority, it is found to be about 270 grains—4½ drachms—in weight; at a variable time after which period it progressively declines in size. I find that Kopp states his having noticed several cases of suddenly fatal dyspnœa occurring in children in whom the gland was found of large size, and that he concludes there is some essential connexion between the glandular enlargement and the suffocative paroxysms. Dr. Copland ("Dictionary of Practical Medicine," art. Larynx and Trachea, p. 679) has remarked, however, that Mr. Hood, of Kilmarnock, was the first to direct attention to enlargement of the thymus gland and its influence in producing morbid closure of the glottis, with suffocation. But he does not even hint that the effects of the preternatural enlargement are other than mechanical—such as pressure on the veins at the top of the chest, inducing congestion and effusion in the head; and no supposition appears to be entertained by him that an unusual size of the gland is accompanied by an increased nervous susceptibility. I have been led to conclude, from the history of the cases that have come under my notice, that a correlation exists between the size of the thymus gland and the development of the brain and impressibility of the nervous system. In such instances of sudden death coincident with abnormal enlargement of the thymus as have fallen under my observation, the children have been noticed as peculiarly forward and intelligent for their ages. The work first quoted above states that "absence of the gland has only been observed in cases of acephalism, where the brain and many other parts have been simultaneously deficient." If it be true, then, that the greater size of the thymus gland has anything to do with the greater development of the nervous matter, force, or excitability, there will be a double reason why an unusual enlargement, or a non-absorption, of that body should occasion suffocative dyspnœa—namely, both from the greater excitability produced, and the inordinate pressure exercised by the gland in a state of turgidity.

Keppel-street, Russell-square, August, 1860.

The Tomb of Harvey.—It has been determined by the College of Physicians, with the consent of the next of kin of the illustrious Discoverer of the Circulation, to restore his tomb at Hempstead Church in such a manner as to secure his remains from the desecration and destruction to which they are now exposed.

Epizootics in Russia.—The Russian papers state that a contagious disease has just broken out in the neighborhood of St. Petersburg, called Pestis Syberiæ, or Carbunculus. It principally attacks domestic animals.

REPORT OF

TWO CASES OF CONICAL CORNEA SUCCESSFULLY TREATED BY OPERATION.

By George Lawson, Esq., F.R.C.S.,

Surgeon to the Great Northern Hospital, and Clinical Assistant to the Royal London Ophthalmic Hospital.

In a paper published by Mr. Bowman in the "Ophthalmic Hospital Reports" for Oct., 1859, he describes a mode of treatment he had been induced to pursue in cases of conical cornea. It consisted in altering the shape of the pupil, by converting the natural circular aperture which is placed immediately behind the apex of the cone of the cornea into a slit, which may be made either vertical or horizontal as the surgeon may desire. The operation is performed by drawing the iris with a Tyrrell's hook through a small incision made at the extreme margin of the cornea by a broad needle, and then fixing it there by Mr. Critchett's method of tying it with a piece of very fine thread. If a vertical pupil is desired, a portion of the iris is first drawn directly downwards, and there fastened, and at the expiration of eight or ten days, or when the eye has become perfectly quiet, a similar proceeding is adopted in the upward direction, and a slit-like pupil results. It becomes, as he there suggested, a matter of experience to determine what alteration in the shape of the pupil is most conducive to improve vision in this class of cases.

As few patients suffering from conical cornea have yet been submitted to this plan of treatment, a record of those who have been operated on, with the result which has accrued from the operation, becomes not only interesting, but extremely useful in deciding what amount of good we may hope to derive from surgical interference.

The two following cases I operated on, one in December and the other in January last; and as eight months have now expired, I may justly speak of the benefit which each has derived as permanent. First, it will be observed in reading the cases that in each the conicity has been much diminished—the apex of the cone has become rounded off into the general curvature of the cornea, and the central opacity is scarcely visible.

It is very probable that this arrest of the increasing conicity of the cornea is dependent upon an alteration of the direction of the pressure within the globe, which is greatest in the normal condition of the eye in the antero-posterior diameter, in a line drawn from behind and passing forwards through the centre of the pupil to the cornea,—to that point, in fact, which forms the apex of the cone of the cornea in eyes which are affected with this disease. Mr. Hulke has demonstrated by microscopical examination that this peculiar condition of cornea is dependent on disease localized in the central portion, and which, yielding to the pressure from within, bulges, and becomes extremely attenuated. If, therefore, by any means, we can alter the direction of this pressure so as to cause it to bear on a healthy portion of the cornea, we certainly place the eye in a more favorable condition; and it appears to me that the slit-like pupil, particularly if made a little to the inner or nasal side, not only allows a more healthy portion of the cornea to receive the pressure from within, but, from its increased size, distributes it over a larger surface, and thus deprives it of a portion of its force.

The next question is concerning the improvement of sight to be gained. In each of the two cases which I am about to quote, distant vision was manifestly improved. In the first case near vision also was benefited, but in the second case the improvement for near objects was not so great as that for distant ones. The improvement of vision, I believe, depends on the rays of light being enabled, owing to the alteration in the shape of the pupil, to enter the eye through a portion of the cornea not much affected by the conicity, and not to the fact of the pupil being a long and narrow one; as when this slit-like pupil becomes dilated and oval, so as to be much longer than the original circular pupil, the patient still continues to experience benefit from the operation.

In each patient I performed a similar operation: instead of drawing the pupil directly upwards and then downwards, I drew it first downwards and slightly inwards, and afterwards upwards and slightly inwards, so that the vertical pupil is rather to the nasal side of the cornea.

Case 1.—R. E——, aged thirty-one, a tall, thin, and rather delicate man, of temperate habits. Has never had any serious illness, but for the last sixteen months has complained greatly of debility, lassitude, and a disinclination to do any work. He suffers as often as two or three times in the week from nocturnal emissions, and feels very low and nervous. A few weeks ago, he accidentally discovered that with the left eye he was unable to distinguish objects, or to read the largest type. On looking at the eye, the cornea is seen to be very conical, with a distinct small central softening. The apex is opaque. He can distinguish a hand held in front of him, but he is unable with the affected eye to count the fingers. He cannot distinguish the markings or the hands on a watch.

On the 30th of November I drew the pupil downwards and inwards, fastening it in this position by Mr. Critchett's method of tying it with a fine ligature of silk.

Dec. 3rd.—I performed a similar operation upwards and inwards.

His sight was greatly improved by this procedure. He was enabled to count fingers and to distinguish the features of friends I saw him about three months ago; he could then count my fingers at a distance of ten or twelve feet, and with difficulty he could make out the time on my watch. The conicity has certainly materially diminished. The right eye was, however, becoming slightly affected, requiring him to use concave glasses.

Case 2.—W. M——, aged forty-two, a butler; a healthy but delicate-looking man, with a very anæmic appearance; married, and has two children. Twelve years ago he says he could see well and read any ordinary type. He has now conical corneæ of both eyes; but in neither very severe. The conicity of the left is the greatest. With the left eye he cannot count fingers; but with a powerful concave glass he can do so with difficulty. The apex of the cone in this eye is slightly opaque. His object in seeking relief was that in following his employment he could not tell when he had filled the wine-glasses, and was frequently apt to pour the wine over on to the cloth. I performed an operation on this patient, in January last, exactly similar to that in Case 1. Shortly after he had gone back to his situation, he wrote to me, saying that he had derived very decided benefit from the operation. A week ago this patient called on me; and I then questioned him concerning the state of his vision. He said he thought he saw near objects better, but there was a great improvement in the way he saw those more distant. He was now able to pour out wine without spilling it; and in my presence, with his best eye (the right one) covered, he filled a wineglass with water to the very brim without spilling a drop. He could distinguish the markings and hands on my watch. The conicity of the cornea was clearly much diminished, and the opacity had almost disappeared.

Park-street, Grosvenor square, 1860.

STIMULATION *VERSUS* DEPLETION.

By Patrick Fraser, M.D.,

Physician to the London Hospital.

The question as to the utility or the non-utility of venesection in the treatment of disease, has engaged the attention of men from the earliest ages. Much has been written upon it, conflicting opinions offered, and unsatisfactory conclusions drawn; but it is reserved to the observer of the present century to witness the great contest on this matter.

The fact cannot be ignored that a remarkable change in the treatment of those alterations in the human frame from a state of health which require the employment of stimulative, and the avoidance of depletive, measures, prevails in the profession. The difficulty is to reconcile the very discordant opinions expressed as to the causes for this change, and their operative extent.

One party asserts that venesection never was, and is not now, necessary, but positively injurious. Another party holds that venesection is now, as formerly, highly beneficial in many cases of disease; although it is now less requisite than formerly. Another, or third party, cuts the Gordian knot, and resolves the whole difficulty into a change of fashion in physic.

One might imagine, judging from recent writers, that this change began about the year 1815, and was perfected about 1833; but that vacillations of opinion on this very subject have been expressed long ago, and that our ancestors have in this, as they have in almost every other matter, foreshadowed changes, will be borne out in the sequel.

The fashion party may be dismissed by observing that the allegation as to the frequent changes, do not apply in the present matter. The fashionable changes —admitting the term—are in mere matter of detail, not of principle, and refer to the substitution of one drug for another; but it is to be remembered that the new remedy has always more or less affinity to the one discarded, and has a similar or approximative action on the animal tissues.

The disputants may now be divided into two parties. The change is attributed by one party to our increased knowledge in the application of physical diagnosis; by the other, to a progressive alteration in the type of disease, or, as Sydenham has called it, "constitutio morborum stationaria."

I am induced to write this paper in order to place before the profession certain tables derived from the statistics of the London Hospital, the results bearing upon some very remarkable questions. But, before doing so, I think that it may not be uninteresting to many readers to give a brief history of the various opinions held upon venesection from the earliest ages, and for the further guidance of future investigators.

I may say, that having consulted nearly one hundred ancient and modern authors, I was suddenly checked in my (perhaps hopeless) labor by the statement of "Dr. Carol. Fred. Nopitsch," a physician of Nuremberg, who cites thirty writers on bleeding before the Christian era, and no less than seven hundred and ten from that period to the year 1830; and we pretty well know that the number is not small since. With this statement before me, I closed my portfolio in dismay, and determined to try something in the way of the Baconian rule, trusting that by a collation of facts, more than by theory, to arrive at some result.

First Epoch.—*From the earliest ages down to the time of Hippocrates.)*

Bleeding was practised by the ancients under various impressions, such as that its effects were evacuant, revulsant, derivative, alterative, excitant, depressant. Prolix disquisitions on these various supposed powers prevail in their writings, and the fact of these opposite powers having been attributed to venesection exerts no small influence on the practice of medicine in the present day.

Our information as to the origin of bloodletting is imperfect, owing to the dark traditions of the ancients.

The Egyptians disapproved of bleeding, but the following is the version by that people of its rise:—It was observed that when the hippopotamus had a headache (whether after an undue potation is not stated), he emerged from his watery bed, and performed the operation of bleeding by striking his ponderous foot upon some convenient sharp stone, thereby causing a flow of blood, which he arrested at pleasure by a pledget of mud. This interesting animal has thereby the credit of having been the earliest surgical operator, as well as having taught mankind the value and use of styptics.

Pliny (His. Nat., viii., 25, 26), in a more elegant fiction, states: "The sea-horse, when too full of blood, scratches himself on rose-bushes, and then staunches the flowing of the blood by rolling in the mud." Our rose-bushes must have deteriorated in their strength of prickles, for very few of the present day would much affect the hide of the modern hippopotamus. But however this may be, it is clearly recorded, like all other matters of ancient history, that Podilarius, one of the sons of Æsculapius, practised venesection, A. C. 1134, and that the first bleeding was made on the daughter of King Dametus. The fee was liberal, being not only the patient in marriage, (who we are bound to believe was both young and beautiful,) but the Chersonese to boot for a dowry.

From the earliest period of our race, the nasal and catamenial fluxes would be observed, and noticed as often beneficial; and down to the present time there have been practitioners who have taken spontaneous bleedings as indicative for the need for general depletion. We are therefore justified in concluding that artificial means of relief would be resorted to—if not, like the polished Tahitians, by opening a vein, at least, like the rougher natives of Guinea, by plunging a knife into the flesh at hap-hazard.

Arriving at more authentic periods, we know that Pythagoras (B. C. 580) disapproved of bleeding; that Hippocrates (B. C. 420) speaks of it as a practice well known, and that he himself practised it: for the name Anaxion is given as that of one of his patients who was bled on the eighth day of pleurisy. This being the only recorded case in which bleeding was practised by Hippocrates, is by many persons considered a proof that he did not often bleed. This conclusion is not supported, however, in other parts of his writings, for this truly wonderful man gives repeated and careful directions as to the veins to be opened, and the manner of the operation; and he gives a specific recommendation to practise it in cases of apoplexy, pneumonia, and pleuritis; and also advises that the bleeding from wounds, except those entering the "ventrem internum," should not be suddenly arrested, as by its flowing inflammatory action might be lessened.

In Sprengell's translation of the "Aphorisms," Sec. 10, Aph. 29, we have the ancient oracle speaking thus: "But if a violent fever should require bleeding, to do it in its full force and height would be to kill the patient; we must stay, therefore, till the fever abates, and not bleed so much at once, but repeat it rather." This axiom is repeated by Celsus. At Sect. 10, Aph. 23, he again speaks: "Letting blood by the opening of a vein is no new thing; but to do this upon account of every disease is entirely new." Verily the oracle spoke then as would truly now apply.

Second Epoch.—(*From Hippocrates to Paracelsus.*)

In the work of M. Freteau on "Bloodletting," there is a brief account of the successors of Hippocrates, of which, with some alterations and additions, we now give an abstract.

The most distinguished disciples of Hippocrates—namely, Diocles and Praxagoras (B.C. 340)—practised venesection; while Chrysippus and Erasistratus denounce the practice; and shortly afterwards Cleophantes employed wine extensively as a remedial agent. We may suppose, therefore, that at this remote period the discussion began, and has continued with varying fervor to our own time, as to the respective merits of depletion and stimulation in the treatment of disease.

The successors of these physicians departed into the different countries under the Roman government, and disseminated and supported the doctrines of their masters according to their adherence. For instance, Aselepiades (B.C. 90) rejected all evacuant remedies, especially bleeding; while Themison approved of its moderate use. This latter passes as the first physician who employed leeches, although there is mention made of their use so early as B.C. 140. Celsus (A.D. 10) bled children, old men, and pregnant women. Aretæus (A.D. 90) speaks of venesection, leeching, and blistering. Galen (A.D. 131) declared himself an adherent to the principles of Hippocrates, and bled frequently; his chief indications were to evacuate the redundant blood in a plethora, or as a revulsant; and he appears to be the earliest writer to specify the exact quantity of blood to be extracted in special cases of disease; and in certain cases he bled to the extent of inducing "deliquum animi." About the year 280, Severus, Antyllus, and Appollonius practised arteriotomy and scarifications. The successors of Galen pursued his mode of treatment. For example, Orabasius, in 360; Ætius, 540; Alexander of Tralles, in 570; Paul of Ægina, in 670; Mesne, Serapion, Rhazes, and Avicenna, during the ninth and tenth centuries. The latter states that the usual quantity of blood in a man's body is 25 lbs., and that a man may lose 20ibs. at the nose, "and not dye." Was this ever proved? Avenzoar, Averrhoes, and Albucasis, in the twelfth century; and the doctrines of the schools of Salernum, A.D. 1000; of Montpellier, A.D. 1200; of Paris, A.D. 1300; also Gui de Cauliac, were Galenistic. The sect of Chemists appeared A.D. 1400, and their influence rather retarded the progress of the healing art, and the act of bleeding was reprobated. Further information upon the opinions of the ancients on venesection will be found in an excellent commentary in Adams's "Paulus Ægineta," p. 319.

In the works of all the men whose names have been mentioned, although bleeding is more or less recommended, then, as now, long and angry disputes occurred as to the prophylactic and curative powers of bleeding, as well as to what veins or arteries should be opened in certain diseases. One and all, however, agree in the necessity for care in the adoption of venesection, and that so powerful a remedy should be employed only "when the disease is of a strong nature, the patient in the vigor of life, and the strength unexhausted." Celsus goes so far as to say, that "to bleed a man in the first stage of fever is to kill him;" and Galen takes the precaution to give lists of diseases in which venesection should never be practised, as follows: cacochymia, plague, dysentery, low fever, intermittent fever, serous apoplexy, dislocations; and in those in which it should be only rarely practised—viz., fractures, renal calculi, small-pox, measles, inflammatory fever; but he recommends it strongly in sanguineous apoplexy, phrenitis, and cerebritis; and we shall see that the moderns have not much more to say on the matter.

THIRD EPOCH.—(*From Paracelsus to Harvey.*)

IN the fifteenth century Paracelsus commenced a reformation in medicine—a man who, "with all his faults," did good service as a thorough reformer to the science of Physic. It is quite certain that a man of his temperament would not stop short in the employment of any remedy promising to effect sharp and speedy cures. We consequently find that he practised venesection: but under what, if any, restrictions, we have no information. A reaction now took place, and Botelli, in 1577, advocated excessive bleeding, to the extent of two or three pounds at one operation, and this repeated four or five times at short intervals.

The cases on record of the large quantities of blood which have been lost without apparent injury, would lead to the conclusion, that the average quantity of blood in the body—viz., 30 lbs. in the adult, has been under-estimated: for example, "A phlegmatic man lost by the nose, mouth, and urine, eighteen pounds of blood, and yet there remained so much in him, that on the application of cupping-glasses, they were instantly filled with blood." (Schenck, Obs. Med., i., p. 172.) Brapavolus had a lady under treatment, in whom twenty-two pounds of blood passed from the nose; she recovered by the use of several remedies, 'one whereof was phlebotomy." (Comment. ad Aphor., xxiii., 15.) Marcellus Donatus (C. xxiii.) gives a case of eighteen pounds of blood issuing from the nose. Amatus Lusitanus relates a case where, within five days, twenty pounds of blood passed from the nose; another, forty pounds in six days, "whom he yet cured by phlebotomy." Montanus says he "cured one of the 'emeroids,' which bled every day for forty-five days, two pounds of blood and more." (Schenck, Obs. Med., xiii, p. 342.) Anculanus gives a case of twenty-five pounds of blood being lost in three days from a wound, and recovered; and several others are related, in which six and twelve pounds of blood were voided by the nose in a few hours, or days, but recovery always took place. Riolan has taken, in twelve hours, five pounds of blood without injury. He estimated that half the quantity of the blood in the body might be extracted without danger; and as he considered the whole quantity of blood varies in different nations, he arrived at the estimate, that a German may lose fifteen pounds; a Frenchman, ten pounds; Spaniards, Moors, and Asiatics, less in the order of their standing. That Botelli had supporters in the practice of excessive depletion, we know from Asteus, a writer in 1583, who argued that ancient as well as modern physicians erred in bleeding too little rather than too much. Van Helmont, at the same period, although he did not denounce venesection, exposed the evils arising from excessive depletion. Although we are not prepared to subscribe to his celebrated motto, "Ego sane nemini sanguinem mitto," still it is a fair question whether the excessive bleedings enjoined by Botelli and his followers, were not more injurious than the total rejection of venesection by Van Helmont and his followers. Various writers—for example, Almarico Blondelo in 1620, J. F. Buchone in 1629, Stahl, Thouvenal, Martianus, Lancisi, Baglavi, Pascoli, Forestus, Pester, Hoffman, Amatus, and, last, Victoris Trancavellus, supported more or less the doctrines of Van Helmont; but to the credit of most of these men, their condemnation of bleeding did not extend to the utter exclusion of it as a remedial agent, but to the avoidance of its abuse only. The last-named writer enters more minutely in his condemnation by designating the diseases in which venesection ought not to be practised—viz., delirium, epilepsy, paralysis, catarrh, ophthalmia, nephritis, hypochondriasis, continued fever, scirrhus uteri, suppressio mensi, menorrhagia, ending by saying, "Nos non debere nimis proclivis nimisque liberales esse in detrahendo sanguine, ne dum Scyllam fugimus in Charybdem incidamus."

We see from the foregoing, that bleeding has been employed as a remedial agent from the earliest period of the history of the human family, but upon the most opposite and sometimes illogical principles.

FOURTH EPOCH.—(*From Harvey to the middle of the Eighteenth Century.*)

We now arrive at the important period when Harvey, in 1619, first publicly taught the doctrine of the circulation of the blood. It might be expected that upon this grand discovery, the wavering opinions as to the practice of bleeding would have become fixed and certain: but this consummation, "most devoutly to be wished," has not been realized; the same discrepancy of opinions and vacillations in practice are manifested in the writers of the period now under consideration. Unable, apparently, to determine on the real question whether, in certain diseases venesection should or should not be performed, the writers now busied themselves in angry discussions as to which vein should be opened in certain diseases, such as veins of the arm, hand, ankle, foot, tongue, nose, canthii majores, temple; in fact, each part of the body had someone to assert its priority. Matthæus Curtius, in the fourteenth century, enters fully into this question; and about 1534 several writers gave opinions very learnedly on the subject. For example; Leonardi Fuchsii—"Apologia contra Hieremiam Thrinerum de Venesectione in Pleuritide"—taught that the vein of the affected side ought to be opened; whereas Andreæ Vaesalii at the same period affirmed just the contrary; and it is not until the year 1741 that M. Martin, in his treatise, gives such instructions as may be followed with safety and propriety at the present day. He tells us that bleeding is indicated when the patient is in the flower of his age, the strength unimpaired, the complexion good, the pulse equable, full, and strong; if he has had previously good nourishment, and if there is general heat of surface and no organic disease: that it is contra-indicated when the patient is enfeebled and the constitution not strong, the skin and extremities cold, the pulse feeble, soft, and intermittent; if the patient has led a laborious and badly-nourished life; and if there should be organic disease. Sebastiano Bado, in 1663, asserted the absolute necessity for venesection in small-pox, and the other exanthemata. Also, M. Patin, a famous physician of Paris, writes in the year 1680, "There is no remedy in the world which does more miracles than bleeding." On the other hand, we find Ramazzina, Richter, and others strongly condemning it.

At the same period, equal differences of opinion prevailed amongst our own countrymen. Sydenham (A. D. 1666) says: "Primum in curatione locum phlebotomiæ attribuo, quæ sine salutis periculo hic omitte nequit." Heberden says: "Febres ardentes raro sanantur sine detractione sanguinis copiosa et repetita." We have a treatise in 1685 by Joannis Franciscus de Francisco, "De Hodierno Practicantium abusu Sanguinem Mittendi semper in Febribus." There is also a most elaborate treatise by Henry Stubbe, a physician in Warwick in 1671. He defends the practice of phlebotomy against the "audacious and impertinent strictures" of "one G. Thomson," contemptuously called "Bacon-faced," a "pseudo-chemist," and a "pretended disciple of my Lord Verulam." This said G. Thomson seems to have had certain strong and not always incorrect opinions upon his subject. He tells us that "We are taught by Divine Writ that in the blood—the *spiritus rubeus*—is life;" that "one would think that it should put a stop to their prodigal, profuse bleedings, if they did but consider with what difficulty nature brings this *solar liquor* to perfection." He was no fool when he observed, "They should never attempt—yea, rather abhor—to enervate in the least, by the lancet, the strength with its correlative blood and spirits, without which there is no hope of a cure; for," he adds, "manente causa, manet effectus." That Dr. Stubbe was honest in his belief as to the efficacy of venesection is fully evinced by his "practising what he preaches." He tells us: "In short, I have myself been let blood above fourscore times, and yet am lean; and so far from being feavourishly inclined, that I never had any, except the measles once, and small-pox twice, and twice a tertian ague." Rejoice, ye physicians of the present time, at your exemptions!

An array of learned theses during this epoch, and closing in upon the end of the century, upon this universal subject,—"De Recta Sanguinis Missione,"—sufficiently attest the divided spirit of the time:—Dr. White, in 1712; John Van Coxie, 1723; Dr. Mentyles, 1744; John Huggan, 1771; Francis Cuel, 1775; William Drennan, 1778.

Fifth Epoch.—(*From* 1750 *to the present time.*)

It is manifest that our forefathers were fully alive to the difficulties involved in the question of the employment of venesection in disease, also to the necessity for care and discrimination in its application; that they held in view the age, sex, temperament, condition of patient, climate, and prevailing diseases; that they were, as we are, often sorely puzzled by discordant opinions; and it is painfully evident that in ancient, as in modern, times blood has been let when it had better not, and not let when it had better been let. Clutterbuck felt this strongly, and he, not very logically, comes to the conclusion that bleeding is useful when it is useful, and hurtful when it is hurtful: somewhat like the justice, who, in his summing-up in a doubtful case, consoled himself by remarking, "If I'm right I'm right, and if I'm wrong I'm wrong."

Several writers allege that the change from depletion to stimulation dates from the first invasion of the cholera morbus in 1830; but we have in evidence that it began much earlier—in fact, that similar discussions date from a very early period. Lind, in 1774, in his essay on the "Health of Seamen," p. 159, says that the physicians in the West Indies began to doubt the benefits of venesection. Hewson, in his original paper, (vol. lx., p. 406, "Philosophical Transactions,") doubts the propriety of bleeding. That Cullen had misgivings is obvious. In book i., par. 139 and 362, of his "Practice of Physic," he says—"Nothing is more evident than that bloodletting is one of the most powerful means of diminishing the activity of the whole body."......"It is, however, to be attended to, that a greater evacuation than is necessary may occasion a slower recovery; may render the person more liable to a relapse, or may bring on other diseases." (par. 140.) "From all this it must appear that the employing bloodletting in certain fevers requires much discernment and skill, and is to be governed by the consideration of the following circumstances:—1st, the nature of the prevailing epidemic; 2nd, the nature of the remote cause; 3rd, the season and climate; 4th, the diathesis present; 5th, the period of the disease; 6th, the age, vigor, and plethoric state of the patient; 7th, the patient's former diseases and habits of living; 8th, the appearance of the blood drawn out; 9th, the effects of the bloodletting that may have been already practised." (par. 142.) It may be seen that Galen and Trancavellus had long before laid down similar rules.

M. Freteau, in 1816, says; "De nos jours, les constitutions sont moins fortes, les individus moins pléthoriques, les maladies franchement inflammatories moins communes."

So early as 1817, Dr. Christison noticed a change in the treatment of fever; but especial attention was drawn to this subject by him in 1834. He writes thus: "Our patients ceased to sustain free venesection, a few ounces of blood bringing on faintness, and the constitution refusing to rally afterwards." The contrast of the foregoing observation with what he writes in his thesis in 1819, is most remarkable. He there describes the "pulse as being at 160, hard, and incompressible; the temperature of the body at 107°; and the blood spouting out with amazing force on opening a vein." At the same period of time, Dr. Macintosh, a man of great energy and originality, who had for many years advocated strongly the practice of bleeding, especially in the cold stage of ague, writes, in vol. i., p. 472, of his "Practice of Physic," "within the last fifteen years I have seen several cases where considerable injury had been inflicted by very large bleedings."

In the year 1820, a strong reaction party existed in the College of Edinburgh, as indicated by several theses of that date, in favor of venesection. The following are examples:—Wm. Garland says: "Inter omnia remedia ad morbos varios sanandos, quibus corpus humanum obnoxium est, nullum majore effectu vel eventu feliciore quam sanguinis detractio adhibetum." John Barne (1821) says: "Medici omnibus sæculis missionem sanguinis remedium esse eximium arbitrati sunt." John Halkenston (1821): "Nostrorum temporum opiniones variæ sunt sed in universum medicorum animi magis de hoc remedio, quam de plerisque aliis consentiunt."

It was about this time that we have it also recorded by truthful and acute observing physicians,—for example, Gregory, Radcliffe, Alison, Watson, and others,—that they required in their own persons, for acute disorders, large depletions, which were followed, as attested by all of them, with great and unmistakable relief to their sufferings. We have seen also, in our explorations of the writings of ancient as well as modern authors, that the employment of bloodletting, as a remedial agent, was not always in a fixed ratio. Unfortunately, the medical writers of the different periods simply state the fact, but have not left us information as to their opinions of the causes. That causes do exist seems certain, for surely the cessation in the employment of bloodletting has followed, and not preceded, the change.

We have now reached a period in which even more angry and censorious discussions took place than heretofore, between men whose opinions demand reverential, careful, and watchful attention. Dr. Alison and Dr. Bennett were the champions. Both agreed as to the fact of a change in treatment having taken place, but differed in opinion as to the cause or causes. The former attributed it to an alteration in the type of disease, thereby inferring some occult change in the human constitution; and if this be the truth, we may also truly infer that the excessive bleedings practised by our forefathers were probably quite right and necessary, thus rescuing their mode of practice from the unmerited obloquy which has been cast upon it by several writers. Dr. Bennett places the change to an increased knowledge in the art of diagnosis. We have no intention of entering minutely into the merits of the late controversy, but we would observe, that it appears to us that Dr. Alison, in allowing his antagonists to apply their arguments to pneumonia alone, weakened his ground; for if this improved diagnostic power be worth anything, it ought to apply to all diseases, which is not attempted; but to all diseases the limitation in bloodletting applies. Again; we admit that through our increased diagnostic power, we are better warned not to bleed in pneumonia after consolidation of the lung has taken place. But this does not explain why even in the acute state of crepitation bloodletting is seldom resorted to now, but which would have been practised thirty years ago, *pleno rivo*, even in the absence of the assumed superior diagnostic power, and with great benefit to the sufferers; neither will it explain the advance in the use of stimulants *pari passu* with a decrease in the employment of depletants.

Drs. Christison, Alison, and others, have alleged the change in the type of disease to proceed from certain atmospheric influences. The former dwelt strongly upon the impoverished state of the poor population, evinced by the scorbutic diathesis, and the prevalence of cholera; but the fact that all ranks of the people, from the patrician to the peasant, have become subservient to the change, invalidates poverty as the main cause, and we know that the change had begun long before the modern cholera appeared. This party does not, as has been alleged, declare that the *modus operandi* of inflammatory action, or its effects, is changed; but simply that inflammation is not now attended by high arterial action.

It has not been, and probably never will be, proved what causes are in operation to effect the remarkable variations which have occurred in the symptoms of disease, and in our anxiety to appear to have some definite views, we are almost impelled to the *non causa pro causa*.

We can scarcely avoid the conclusion that certain causes are operating in cycles; that, in fact, the human family are subjected to periodic changes, impressing, as it may happen, a sthenic or asthenic character on the prevailing diseases. If this idea should be recognised as a fact, the extraordinary discrepancy of opinion as to the curative value of bloodletting would be reconciled and explained. That this change is not merely local, but pervades the length and breadth of the land, and that it has been recognised throughout Europe and America, is shown by the general intolerance of bleeding, not only in man, but amongst domestic animals, as proved by veterinary practitioners. In our experience we have witnessed exemplifications of this change. We remember cases similar to those commented upon by Stephens, Turnbull, Watson, Symonds, Hastings, Richardson, and others, where the injected eye, flushed face, burning heat of the skin, violent arterial throbbings; the incompressible, sharp, and wiry radial pulsation; urgent dyspnœa, a red tongue, intense headache, and other local pains, unattended with muscular debility, appeared to render bloodletting imperative. Contrast such cases with those, with few exceptions, now witnessed in town and country practice, in which there is little or no heat of skin, no arterial excitement, feeble and easily compressed radial pulsation, a white, loaded, and flabby tongue, a pearly-white conjunctiva, not much pain, but extreme prostration, urging to the employment of stimulants.

We have reason to believe that these changes in the type of disease occur sometimes at very short intervals. In China, during the month of February, 1830, an epidemic fever occurred amongst the English sailors, in which the tongue was white and loaded, no arterial excitement, and no pain. In the month of May following, a second epidemic appeared, during which the symptoms were—headache; pulse from 80 to 110, full, and bounding; tongue clean; severe epigastric pain. The following comment was made at the time: "We believe this fever to be of a different type from that witnessed in February;" and the question is put, "Is bleeding necessary in both types?"

The history of influenza will furnish many similar instances. Everyone knows the variations which have occurred in the symptoms of this malady, requiring a complete change of treatment. We know, indeed, that from the earliest ages the symptoms and organic lesions have varied in similar epidemics. There have been variations noticed even in the same epidemic at different periods of its history.

In the foregoing paper, we have seen the small result after all the disputation; and although the grand fact that an extraordinary increase in the employment of stimulants, and disuse of depletants, is going on is generally recognised by the profession, it has not been demonstrated by undeniable statistics. This we shall proceed to do. The tables *in extenso* would occupy too much of the valuable space of this journal, but we consider that the following summary will be sufficient to enable the reader to draw inferences and deductions. Seeing that the blood-letting controversy is still open, and as in its settlement there are involved points of great practical importance, it behoves all practitioners to note carefully the effects of the stimulative or depletive system in the treatment of disease; for it becomes a practical as well as a scientific question to ascertain the difference, if any, in the mortality in the practice of medical men, who notoriously prescribe excessive, moderate, or no stimulation at all, or the reverse . for only in this way, in this particular matter, can error be detected and truth substantiated.

It becomes more imperative in us to urge a general statistical inquiry, seeing that, in this the *first* published document of the kind we are obliged to admit that the results are negative and contradictory; and it will be only by a collation of similar reports that our aspirations may be realized.

We admit that, before we can draw absolute truth from statistical data in this matter, we ought to have an equal number of cases—the age, sex, and previous habits—an equality in the intensity and duration of the symptoms; for it is an inseparable element of disease that in no two cases will the phenomena be exactly alike; and it is this very dissimilarity that calls for the acumen and observing power required by the medical practitioner. But it is evident that, if this rule were rigidly enforced, we should be deprived of all aid from medical statistics; and we must be content, therefore, with approximative truth.

Considering the importance of the question at issue, whether taken in a sanitary, prophylactic, or financial view, it would be highly valuable to possess authentic records as to the practice of venesection and other depletory measures, and of the expenditure of the various items comprised under tonics, stimulants, &c., with the corresponding mortality, in the various hospitals of London, and elsewhere. Unless this general information be possessed, a serious error would arise in an attempt to generalize upon limited data. We must take into account also the varying and unavoidable causes in constant operation, quite irrespective of any peculiarities in the mode of treatment and diet, such as good, bad, or indifferent drainage and ventilation, and all other sanitary conditions which must affect the mortality of a large general hospital.

In the following summary of the tables, we give, for the convenience of comparison, three decennial periods.

In the year 1835, there were treated as in-patients in the London Hospital, 2735 persons, of whom 277 died, being at the rate of 10 per cent. During that year there was expended for these 2735 patients, the sum of £615 for beer; £346 for wine; making a total of £961. To counterbalance the effect of these stimulants, blood was drawn by 33,950 leeches, to say nothing of bleeding and cupping, then largely practised.

In the year 1845, there were treated as in-patients 3625 persons, of whom 228 died, being at the rate of 6¼ per cent. These patients consumed, in the course of their treatment, wine and spirits to the amount of £848; or, to be more minute, they drank 10 gallons of brandy, 236 gallons of wine; 10 gallons of gin, and 96 gallons of spirits of wine besides were exhausted. To meet this alcoholic accumulation, blood was drawn by 33,800 leeches, to say nothing of venesections, cuppings, &c.

But what transpired in 1855? In that year 3947 patients were treated in the Hospital, of which number 294 died, being at the rate of 7½ per cent. This number of patients consumed during the year, 143 gallons of brandy, 1153 gallons of wine, 60 gallons of gin, and 144 gallons of spirits of wine were exhausted, at a cost of £1796, as against £848 and £961 for the two previous decennial periods. But now appears the strange fact, that during the year 1855 the effects of this accumulation of alcohol were diminished by the quantity of blood drawn by 4400 leeches only, with, perhaps, not a single venesection, and at an average of not more than two cuppings per week, as against, 33,800 and 33,950 leeches, frequent venesections and cuppings, for the two previous decennial periods.

Pursuing this inquiry, it is found that in the year 1837 there were used in the London Hospital only 29 oz. of quinine, and 101lbs. of bark. Whereas in the year 1857 the consumption of these and analogous drugs were as follows: 54 oz. of quinine, 478 lbs. of bark, 600 oz. of the disulphate of bark, and 47oz of the quinine with the citrate of iron. The number of patients in 1837 being 2961; in 1857, 3935: and the per-centage of deaths being respectively—for 1837, 14 per cent.; for 1857, 8 per cent.

The two years above noted are sufficiently proximate to allow the same line of argument as for 1835 and 1855.

Attention should be drawn to the fact that in the year 1844 there was expended for stimulants only £821, being the *smallest* amount during a period of 22 years; and that the mortality in that year was 6 per cent. the *smallest* per-centage of mortality during the said period of 22 years. We are not quite satisfied but that, if a rigid inquiry were made, the largest mortality would be found where the largest quantity of stimulants was given. It is to be observed that in the year 1851, when the number of patients —viz., 4051—was larger than in 1857—viz., 3935,— the mortality was nevertheless greater during the latter year, as 8 per cent. to 6·50 per cent.; although the increase of expenditure for articles of luxury, &c., during 1857, exceeded that of 1851 by the large sum of £962.

Another puzzle is presented on looking upon the results of the year 1858. We have in this year a less consumption of wine and spirits (namely, £573 3*s.* 3*d.*) than during the preceding 23 years, the average for the 24 years being £1055; but the quantity of tonics remains nearly the same as in 1855:—Ammonia sesqui., 140lbs.; quinine, 50 oz.; quinine and citrate of iron, 5lbs.; bark, 511 lbs.; disulphate of bark, 660 oz.; leeches, 3900.

The table from which the following additional summary is compiled brings into view rather startling and puzzling facts. It extends over a period of ten years, and therefore is a perfect average, and we have divided it, for our present purpose, into two quinquennial periods. It shows a direct rising increase annually in the expenditure of wine in the treatment of their patients by the physicians and surgeons of the hospital; and it so happens that from changes in the staff this decennial period embraces the practice of six physicians, rendering the alterations in, at all events, the medical practice less likely to have arisen from any peculiar or personal views.

To economize space, we have not given the quantities employed by each individual physician or surgeon, but the aggregate.

From the year 1849 to 1853 inclusive, the annual average quantity of wine employed by each physician was 4928 ounces. During the same period the annual average number of patients under the treatment of each physician was 390; the annual average mortality being 9·68 per cent.

From the year 1854 to 1858 inclusive the annual average quantity of wine employed by each physician was 12,803 ounces. During the same period the annual average number of patients under the treatment of each physician was 391; the annual average mortality being 11·87 per cent.

In the surgical wards a similar unexpected result is observed.

From the year 1849 to 1853 inclusive the annual average quantity of wine employed by each of the surgeons was 17,533 ounces. During the same period the annual average number of patients under the treatment of each surgeon was 1075; the annual average mortality being 4·48 per cent.

From the year 1854 to 1858 inclusive the annual average quantity of wine employed by each of the three surgeons was 38,016 ounces. During the same period the annual average number of patients under the treatment of each surgeon was 1036; the annual average mortality being 5·06 per cent.

It may be supposed that, as regards the medical cases, this unexpected result proceeded from a difference in the kind and severity of diseases which were fatal during the periods included in the calculations. Information on this point in these cases is not available; but as regards the surgical cases the record is complete and correct, and from it we learn that this cause does not operate, as the remarkable fact is demonstrated by another table that the annual average number of each kind of accident during a period of ten years is very nearly alike; thus adding one more illustration of the unexpected fact elicited by statistics—namely, that the mechanical causes producing accidents in a fixed population are pretty permanent; for we cannot assume that there has been an unusual severity in the character of the accidents. The table gives a more extended basis, as regards surgical cases, to this inquiry, as it includes the out-patients as well as the in-patients; and we see at once that the same regularity continues in the kind of accidents with the larger number of patients. We repeat that we should be very sorry even to attempt to generalize on the limited data now presented to the reader; nevertheless we do consider that the facts brought out in these tables are of sufficient weight and importance to warrant us in asserting that the profession ought to pause in an indiscriminate employment of stimulants and tonics, especially the former, in the treatment of disease, even of apparently an asthenic character. Many excellent men —Mr. Higginbottom, for example—have denounced the stimulant treatment *in toto.* We are not yet prepared to go so far, for where there is so much of doubt, it behoves all of us to entertain tolerant views.

ON THE

PATHOLOGY AND TREATMENT
OF
SCROFULOUS DISEASES OF THE SYNOVIAL MEMBRANE OF JOINTS.

By Richard Barwell, Esq., F.R.C.S. (Exam.),
Assistant-Surgeon to Charing-Cross Hospital.

[*Concluded from September No. p.* 208.]

There is no doubt that even the most chronic, insidious, and painless form of this complaint is, at least in the first stages, an inflammation; and hence, the joint must at once be placed at absolute rest. Some form of counter-irritant should be employed, and proper internal remedies to ameliorate the constitutional condition. This is not the place to enter into the reasons that would cause the choice of one counter-irritant more than another, but it is desirable to point out the disadvantages attending a certain plan too much in vogue. A patient applying with this disease is generally ordered a splint—perhaps leeches, or a blister; and after a time an issue is made, which is kept poulticed for a month or two, discharging all the while. Now it is evident that nothing can more conduce to the spread of the new tissue, whose encroaching growth constitutes the disease, than warmth and moisture, unless it be an indolent suppurating and granulating sore, such as an issue becomes a week or ten days after its application. If issues are thought desirable, they should be either kept open for only a short time after the separation of the slough, and another be made, or they should be touched again with the caustic potash, and so kept irritable. The former method has its disadvantage in the breadth of surface destroyed; the latter, in the depth to which the sore penetrates, and both in the very great pain produced by the treatment. Some persons have believed, and do still believe, that the amount of benefit is proportionate to the pain. This is a mischievous idea, since it leads to a cruel line of of practice. The notion, no doubt, was obtained from the observation, that issues benefit mostly at first, and that in a short time their action becomes null, or absolutely injurious, since the constant discharge weaken the tissues, and tends to produce cell generation all around.

A much better, and a much less painful plan than the issue, is the actual cautery; it is one which I would wish to see much more generally used; but its application requires some practice, skill, and knowledge, since an unskilful use is apt to produce too great a destruction of skin, too deep a furrow, or other evils instead of benefits. If the means be judiciously employed in properly chosen cases, its action is marvellous, and now that chloroform prevents the immediate pain, the objections which caused it to be disused in England have disappeared.

The iron which I employ for this purpose is known as Rust's: it is simply a three-sided prism, mounted by one of its oblong facets to a curved handle. The edges are slightly blunted. An iron of this shape has bulk enough to retain the heat a sufficient length of time, and yet presents a small edge. Two irons ought to be used, as a white, not merely a dull-red, heat is desirable, and thus a change of instruments is necessary. While the patient is being placed under the influence of chloroform, the joint to be cauterized should be protected by strips of plaster, or of moistened lint, a good inch, or an inch and a half broad, leaving narrow intervals between each, where the lines of firing are to run. When anæsthesia is fully established, a white-hot iron is to be slowly, and with gentle pressure, passed three or four times along each space, until the skin be turned into a yellow-brown horny substance. Let it be particularly observed that the rays ought not to be nearer than an inch; the skin must not be divided by the iron; the heat must be sufficient to char the skin. This mode of using the iron was called by Percy, ("Pyrotechnie Chirurgicale,") "cauterisation transcurrente." We might name it linear cauterization. Rust, of Vienna, and Bonnet, of Lyons, employed it with great success. My own experience warrants me in speaking of it very highly. In the first place, it gives no pain whatever at the time of application, and when the effect of the chloroform has disappeared, still no pain from the cautery can be felt. Compare this with the torture produced by the potassa fusa, under which the patient will writhe for hours after the application. But not merely is the hot iron painless; it absolutely relieves pain. I applied it in a case of hip-joint disease, in which the patient was suffering so much that he dared not move; his face was anxious, and his nights all but sleepless. After he had recovered from the chloroform, he was laughing, talking, moving about in his bed, and wanted to get up. In a case of knee-joint affection, the same change from pain to painlessness followed the use of the iron, and the patient is now able to walk. The narrow charred lines made by the cautery begin to separate in from five days to a week, and come away between the fourteenth and twenty-first day. They should then be healed as quickly as possible.

The value of pressure in strumous synovitis cannot be too highly estimated, if the proper cases be chosen for its use; such, for instance, as those in which the swelling is soft and sluggish, in which a bursting pain is felt, and in which a sensation of cold is experienced. Dr. Scott, of Bromley, first used this plan with considerable success; he applied mercurials to the joints, and over them strapping plaster. The value of the treatment lies in the pressure. Mercurials are of little or no help; in strumous cases I believe they are even injurious. The *modus operandi* of this agent I believe to be, simply preventing the cells, through want of room, from generating afresh, and, therefore, constraining their organizing force to act in the production of tissue from the cells already formed, or in the absorption of those unfit for this purpose. I know no means at all comparable in their power of resolving strumous synovitis to the use of the actual cautery followed by pressure. If, for instance, on the knee-joint the lines have been drawn parallel to the axis of the limb, they will, on healing, contract very considerably like all scars of burns; and if to the pressure thus produced, be added that of strapping plaster, an almost irresistible power of resolution will have been gained. Indeed, unless the case be too far advanced, or too much supported by a vitiated constitution, it will yield to this treatment in a few weeks. The following case shows the value of this method:—

Jane S——, aged six, a pale, strumous girl, has been suffering for twenty months from pain and swelling of the left knee, and was admitted into Charing-Cross Hospital under my care, (through the kindness of Mr. Hancock,) Dec. 9th, 1859. The knee is a good deal bent, the joint being round and shapeless; the child cries when it is touched, and when any attempt is made to move it.

Dec. 31st.—I drew four striæ of linear cauterization, one on either side the patella, and one an inch beyond each of these, and got the limb into a straight position. On recovering from the chloroform the child expressed no sense of pain, but sat up, and began to play with toys and other children in the ward.

On the third day the skin between the cauterized lines looked red and inflamed. On the fifth, some separation at the edge of the slough had occurred. The horny portion gradually separated, and on the 1st January, 1860, the lines left were simply clear lines of ulcer, which were dressed with zinc ointment, discharged very little, and gradually healed. The knee was much diminished in size; moreover it could be pressed without producing symptoms of pain. It was, however, still swollen, and on the 23rd January, when the scar was quite sufficiently healed, the knee was tightly strapped, and a roller applied from the foot.

30th.—Strapping applied again, and towards the end of the week the child was dressed, and allowed to get about by aid of the sides of the bed and of a chair.

March 6th.—The child is able to get about so well that the mother insists on taking her out; promises to bring her to me amongst my out-patients. This she has hitherto not done.

Other cases showing the value of pressure might easily be given. I recorded three in THE LANCET (February No. p. 102.) Several others proving the extreme value of this combination have occurred to me.

We now, however, come to a much-neglected question—one which is, perhaps, scarcely comprehended in regard to the treatment of strumous synovitis—viz., is the principle of perfect rest to be exchanged for that of limited motion at any period of the disease? If so, at what period? I say that this question is either not understood or is ignored in England altogether; while, in Lyons, M. Bonnet applied some practical suggestions to the answer.

I must, at the risk even of occupying much space, explain the principles whereon the value of passive motion, shampooing, &c., is based. When the cells, which have formed so abundantly in and around the synovial membrane, cease their generative activity, they remain for an indefinite period more or less passive. We know that the gelatinous condition thus produced may last for years without change, and that, being left undisturbed, the mass will, after a time, become the seat of abscess, cause destruction in surrounding parts, produce caries, &c.; or, in more favorable cases, it will begin to assume a fibroid character, and ultimately unite the two bones by anchylosis. Now, I have no hesitation in saying that, in the large majority of instances, the passive condition may be taken advantage of to induce a much more perfect, frequently an almost complete, cure of the malady; and that, by allowing it to continue, a much larger mass of disease is formed, much more tissue (periarticular, cartilaginous, or osseous) is implicated, and, therefore, even if the joint ultimately heal over, the cure is far from being as perfect as it might be made; and if degeneration set in, the ravages are unnecessarily wide-spread. Moreover, be it remembered, that if even a healthy joint be kept very long immovable, fatty degeneration of the cartilages is apt to come on, and even a sluggish inflammation of the synovial membrane. It must not be, however, for one moment imagined, that I would advocate movement of the joint at all stages of the disease. On the contrary, such treatment can only be beneficial during the above-named passive condition, and when all inflammatory signs have disappeared. Hence it is important to form a correct judgment as to this condition. It is well known that each joint, when inflamed, presents a certain spot in which pain and tenderness are much more marked than elsewhere; this is in every joint a fixed point—on the hip, behind the great trochanter; in the knee, the edge of the inner condyle, inside the ligamentum patellæ; in the elbow, at the back, over the head of the radius, and so on. Now, if the surgeon find that pressure upon these points produces no pain, he may begin to move the limb with perfect confidence and safety; and, as far as my experience goes in this treatment (already pretty considerable), with very great benefit. The movement must not, at the beginning, be violent or long continued; a slight passive motion, and that rigidly in the normal direction, a certain amount of rubbing and kneading with the hand, and then reapplication of the splint, are all that can be undertaken; and it may be a long time before it will be safe to abandon the patient's limb to his own management. I have also found it a useful plan, when it can be managed, slightly to change the angle of the splint at each reapplication.

The subject of angle at which the joint would be flexed, would naturally lead us to consider another subject—viz., the value, as an actual remedy for inflammation, of changing any vicious position in which the joint may lie. There is no room for doubting the diminution of the inflammation and of the pain after this has been done; and amongst my cases are one or two which were clearly benefited by this means. But this subject is too wide, and space too limited, for its discussion here.

The three methods more particularly named in this communication—viz., actual cautery, pressure, and passive motion, are neither original nor new; but the first and last more particularly are not used so frequently, nor with such discrimination and power as they might be. Much benefit would result from substituting these means for the negative, if not injurious, treatment to which these strumous cases are too often subject.

Old Burlington-street, 1860.

MARRIAGES IN PARIS: RELATIVE AGES OF THE BRIDES.—Out of 1000 marriages, it was found, in lately consulting the official Register, that 32 women were from fifteen to sixteen years old; 100, from 16 to 17; 219, from 18 to 19; 233, from 20 to 21; 165, from 22 to 23; 103, from 24 to 25; 60 from 26 to 27; 45, from 28 to 29; 18, from 30 to 31; 14, from 32 to 33; 8, from 34 to 35; 2, from 36 to 37; and 1, from 38 to 39.

EXTENSIVE LACERATION OF THE UTERUS AND VAGINA BETWEEN THE FOURTH AND FIFTH MONTHS OF PREGNANCY.

DEATH WITHIN TWO HOURS; DISSECTION; MEDICO-LEGAL INVESTIGATION.

By Oliver Pemberton, Esq., M.R.C.S.

Surgeon to the General Hospital, and Lecturer on Surgical Pathology in Sydenham College, Birmingham.

On Tuesday, July 24th. under the Coroner's warrant, I examined the body of Sarah Sanders, aged thirty-nine, a married woman, residing at Hockley-hill, Birmingham, who, I was informed, had died in consequence of a miscarriage on the previous Thursday, the 19th ult. Dr. David Nelson, of this town, who had seen the woman immediately before her death, whilst she was attended by a druggist of the name of White, was present during the inspection.

The body was that of a stout, well-formed woman, presenting no external marks of injury whatever. Decomposition had not advanced. Immediately adjacent to the uterine outlet was a large collection of clotted blood, that appeared to have passed out subsequent to the death.—Thorax: There was no effusion into the pleural sacs. The lungs were healthy, their posterior parts being congested from position. The heart and its covering were healthy; its cavities were completely emptied of blood; its valves and the great vessels were healthy.—Head: The coverings of the brain and the brain itself were pale in appearance; otherwise they were healthy.—Abdomen: The intestines were greatly distended by air. The liver, pancreas, spleen, and kidneys were perfectly healthy, but paler than natural. The pelvic viscera were in their ordinary position. The uterus presented the external appearances of having recently contained a fœtus at about the fifth month. On turning it back from the rectum, the peritoneal coat covering its posterior surface was seen to be split to the extent of an inch near the upper part; whilst the subperitoneal tissue about this point, and stretching onwards along the situation of the right broad ligament was extensively filled by extravasated blood, but there was no blood in the cavity of the peritoneum. The urethra was natural. The bladder was natural and empty. The rectum also was natural. The vagina presented a laceration on the right side, near the upper part. This extended onwards through the adjacent lip of the os uteri, and through the uterine wall beyond. The edges of this laceration were irregular and torn, and were infiltrated with blood. It measured six inches in length, about equally divided between the uterus and vagina. The hand passed readily through this aperture amongst the tissues of the pelvis, the fingers lifting up the peritoneum behind the situation of the broad ligaments, in the direction of the extravasated blood previously described. The parts around, forming the walls of this cavity, were jagged and torn, but the peritoneum had not given way. The uterus was enlarged to correspond to between the fourth and fifth month of gestation. In all other respects, the uterus, vagina, and appendages were perfectly healthy. The placenta had not been separated from its attachment to the upper and posterior part of the fundus. Its structure was perfectly healthy. Its fœtal surface was ragged and torn, and there were no traces of the membranes or cord.

The fœtus measured between eight and nine inches in length. It was well formed and well nourished for the age at which it had arrived, and presented no intra-uterine maceration. I deemed it to have reached between the fourth and fifth month of gestation.

The previous history of this case, as detailed at the inquest, was as follows:—

Sarah Sanders was pregnant with her fourth child, and believed herself to be gone about four months. On the 18th July, she was in her ordinary health; but in the course of the night she was seized with pains, which subsequently turned out to be those of premature labour. Some discharge of blood had taken place on the previous 17th and 16th. Her husband gave her gruel, and adopted the usual homely remedies; but as these did not tend to relieve her, a neighbor, a respectable woman in the habit of attending at births, was sent for between two and three o'clock in the morning of the 19th. At about five, White visited her, and gave her a mixture containing tincture of ergot, diluted sulphuric acid, tincture of opium, and infusion of roses. He then left. At to a quarter-past eleven she was delivered of the fœtus. Up to this time there had been no bleeding beyond a little draining. Between eleven and twelve, White again visited her. She was then losing blood, and the after-birth had not come away. At a quarter past one in the afternoon, this was stated to have been removed by White by the introduction of the hand, and was further described as being in a decomposed and diseased state. After this so-called removal of the after-birth the bleeding continued, she became very low, and died at a quarter to three o'clock, about an hour and a half subsequently.

At the coroner's inquest, held on the 24th of July, I gave evidence to the effect—

1st. That deceased had died in consequence of the combined effects of shock and hæmorrhage produced by the laceration in the uterus and vagina.

2nd. That such an injury was inevitably mortal, death ordinarily taking place in a few hours.

3rd. That the laceration occurred in consequence of attempts having been made to remove the after-birth by the introduction of the hand into the uterus.

4th. That any such introduction of the hand into the uterus at that period of gestation (the fourth and fifth month) was uncalled for and improper.

5th. That, regarding the size of the fœtus, the absence of any enlargement of the head or abdomen, and the healthful condition of the uterus and vagina, it was impossible for such a laceration to have been produced during natural labour.

The result of this evidence was, that the jury found a verdict of manslaughter against White; and on the 4th of the present month he underwent his trial at Warwick, before Mr. Justice Williams.

The description which I have given of the parts as they appeared at the post-mortem examination was assented to in all particulars by Dr. Bell Fletcher, one of the physicians to the General Hospital; and by Mr. John Clay, one of the physician-accoucheurs to the Queen's Hospital in this town, who both of them carefully examined the structure removed from the pelvis.

At the trial, despite the attempts made by counsel to attribute the death to the effects of diseased action and placental hæmorrhage, I maintained the opinions I had given before the coroner as to the impropriety of the treatment, the nature of the injuries, and their influence on the death, being supported to the fullest extent by the testimony of the gentlemen to whom I have referred.

In summing up, the judge, after presuming that the prisoner's mode of treatment caused death, narrowed the evidence to this question—"Is it a want of ordinary skill to be ignorant of that which may be done at one stage of pregnancy and not at another?" It was a fact also to be taken into consideration, in judging of the man's skill, that the patient was in humble circumstances. Was it a want of ordinary skill and ordinary care? If in doing his best he did that which, in the knowledge of the medical witnesses, was most certainly fatal, then did he bring such an inefficiency of skill and care to his task as to render himself amenable to the law of the country?

The jury, after a short consultation, acquitted the prisoner.

Temple-row, Birmingham, 1860.

ON A CASE OF

DOUBLE TRANSVERSE HEMIPLEGIA.

By William Baker, A.M., M.D., Howden.

Master H——, aged four years, a quick little boy, was slightly unwell on the evening of the 23rd September. He was thirsty and feverish, passed a rather restless night, and complained of pain in the *back part of the head and neck.* Without much change he continued slightly complaining till the 26th, on which day it was perceived he could not carry his head steadily, or bear the erect position without complaining of greatly increasing pain in the neck. No great importance was attached to his condition by the parents, and their medical attendant, Mr. Newstead, was not consulted till the 27th. Even then the serious symptoms which soon followed were not indicated or suspected, and it was hoped that the pain might be muscular. On the 29th, it was perceived that the *left arm* was paralysed, and the paralysis gradually extended to the *right leg*—the right arm and left leg being still perfect. On October 1st, the *right arm* was invaded, and the paralysis gradually increased, and extended to the *left leg.* I visited him on the 3rd of October. The paralysis was the most complete in the first-invaded limbs; the only power over them was slight movement of the fingers and toes. The right arm and left leg he could flex in a trifling degree, and continued to do so to the last. Occasionally, some slight improvement took place in this arm, to which he would exultingly call the attention of his mother. The spirits and appetite of the little fellow were generally good, and the control of the sphincters was perfect. In this condition he continued, without any important alteration, till the 24th, on which day he showed increased weakness and loss of spirits, and some slight gurgling was occasionally heard in the throat. This symptom continued. He was supposed to be slightly convulsed in the night, and died on the 25th. The intellect throughout was undisturbed; sensation and the sphincters perfect; the respirations rather quick, but never embarrassed; pulse variable, frequently quick; and temperature rather exalted. The treatment adopted was gently and persistently antiphlogistic; the position recumbent.

I greatly regret that my report of this interesting case should be so defective in the most important part of its pathology; no after-death examination having been made, the anatomical change by which the paralysis was caused, as well as the site of any such lesion, much ever remain in doubt. When the four limbs lose their power, either simultaneously or in succession, and the cause is in the brain, it is presumed that both hemispheres must be implicated; we likewise know that similar effects may follow lesions of the spinal cord alone. In this case I think the mischief was not in the brain, intelligence and facial expression being unchanged, and all the nerves of special sense and also those of common sensation perfect. When the brain sustains an injury above the decussation in the medulla oblongata, and paralysis is the result, the cause and effect are presumed to be invariably opposite or crossed; but in lesions confined to the spinal cord, the effect is said to be as regularly direct, and probably never crossed. Here we have a paralysis of the four limbs—a well-marked *double transverse hemiplegia;* and in spite of a crossed manner of invasion, I am disposed to place the cause of the malady in the spine. On my visit on the 3rd of October the paralysis was in its most complete state, and, from the history of its approach, with the attendant symptoms, I most certainly deemed it an idiopathic affection of the spine, and pronounced it spinal apoplexy. The pain was confined to the cervical region, greatest at the upper part; there were likewise morbid heat and tenderness, and I presume this was the site of effusion or extravasation, if any such existed—whether of blood or serum is unimportant. Any effused fluid beneath the pia mater of the medulla might travel from the neck to the cauda equina, and the result would be either a complete extinction of sense and motion, or any other degree of modified lesion of either. I certainly am not acquainted with any particular symptom that may be deemed pathognomonic of spinal apoplexy; and for the production of such a condition as I have described, I presume it is not necessary that there should be either effusion, extravasation, or any other detectable lesion, either in the cord or brain.

Baron Cuvier, in his last short illness, suffered from a transverse hemiplegia; the power of deglutition was destroyed, and his speech greatly altered. He first complained of being unwell on the Monday,—a slight irregularity in the bowels. An enema was administered, and on Tuesday he was well, and delivered his usual lecture at the College, displaying great and unwonted energy, and likewise on the same day used more than ordinary bodily exertions. On Wednesday he felt pain in the right shoulder and arm, with some slight loss of power in the hand. He still attended a state council on that day, and on his return was most urgent for his dinner, during which he experienced great difficulty in swallowing solids. On Thursday he could not move his right arm. There was some headache, and deglutition more difficult, in fact impossible, and for the conveyance of matters to the stomach the œsophageal tube was used. The night was restless, and on Saturday morning there was palsy of the movements of the left leg: all mentioned symptoms were worse, and, in addition, the hands were cold and the nails blue. On Sunday he was calm, complained but little; his voice was greatly changed, and his appearance ten years older. Harassed and exhausted as he was by treatment and disease, his intelligence still was perfect. At nine o'clock he said his mind was leaving him, and he died a quarter before ten, sitting upright in his chair. The spinal column was cautiously opened, and its contents most critically examined, but no trace of disease was found. The brain, pharynx, and œsophagus equally failed to present any morbid condition—in fact, in no part of the body could any change be discovered to which the sufferings and death of this illustrious man could be attributed. The Baron was sixty-three years of age. He had taxed his mental and bodily powers unusually, and, in the absence of every morbid change of structure, it is not unfair to presume that his illness was the consequence of exhaustion alone. If such was his condition, the repeated local and general bleedings, blisters, and nauseating enemas, so diligently and vigorously used, must have greatly lessened, if not destroyed, every chance of the restoration of this great man.

Presuming that my little patient had effusion in the spine, was the result consequent upon the same within the cranium? There was undoubtedly inflammation, as indicated by heat, pain, and tenderness in the upper cervical region, and the great benefit found by leechings. It is probable that death was caused by an extension of inflammation to the brain.

Howden, 1860.

HYDROCELE RADICALLY CURED BY THE WIRE SETON.

By Raphael W. Read, L.R.C.P.E., F.R.C.S.Eng.

Surgeon to the 30th Regiment.

The isolated cases of the above mode of treating hydrocele which one sees now and then published in the pages of The Lancet, and in those of other similar professional periodicals, lead, perhaps not unnaturally, to the conclusion that the subject is one of interest to the medical world. Impressed with this idea, I venture to solicit the insertion of the following details of an instance of this affection, so treated which has presented itself in my own practice.

Daniel M——, aged twenty, a soldier in the Donegal Militia, attached, *quoad* medical treatment, to the 30th Regiment, reported himself to me, on the 24th of December last, with a moderately-sized hydrocele on the right side, the testis occupying the usual situation. His appearance was healthy, his frame muscular, and he stated that, some few months since, he had been subjected to the operation of tapping, but that within a short period of his discharge from the hospital of his own corps, the swelling had gradually reappeared. He came under my care as being one of a small detached party of that regiment sent to the Curragh Camp from England, in consequence of those composing it having declined to serve out of Ireland after the regulated period had elapsed.

He was at once taken into the hospital, purged, ordered light and nutritous diet; and on the 26th a trocar was introduced low down, and the fluid contents of the sac, about nine or ten ounces, drawn off. A straight needle, armed with a single thread of the ordinarily-sized metallic wire (iron) was then passed up the canula, and brought out about an inch and a half above the entrance of the trocar; the canula was then withdrawn, and the ends of the wire seton fastened loosely together, forming a large slack loop. In conducting this latter stage of the proceeding, great care was taken, by making the end of the canula project well outwards and forwards, to prevent the possibility of including either a portion of the testicular layers of the tunica vaginalis, or of the gland itself, within the loop.

On the morning of the 27th I found the man anxious and feverish, having passed a sleepless night, although comfortable at my visit on the previous evening. The scrotum was much swollen, and he complained of violent pain. The seton was immediately removed, after having been inserted just twenty-one hours; fomentations were applied, and a laxative prescribed. Inflammation, with great constitutional disturbance, ran on rapidly, and on the 2nd of January obscure fluctuation, with a boggy feel, having become apparent, a free transverse incision was made at the most dependent part of the swelling, which was now nearly as large as his head. Some ill-conditioned matter was evacuated, and large sloughs exposed; but the opening not having been deemed sufficiently extensive, another higher up, and in a longitudinal direction, was practised next morning. A very considerable oozing of blood into the poultice occurred after its application, and not being immediately discovered by the attendant, or mentioned by the patient himself, more was lost than he could well afford. The countenance was exsanguine, the lips blanched, the extremities cold; in fine, he was bordering on *deliquium animi*, although the actual quantity of blood lost did not exceed a very few—say four or five—ounces.

At this time the case was exceedingly critical, necessitating the most careful watching, as well as the almost continuous exhibition of diffusible stimulants and nutriment. The pulse was not to be counted, being more an undulation then anything else, whilst the tongue was dry and brown, and there was a tendency to delirium. Nevertheless the patient's courage never forsook him; he declared that he should get well, and his fortitude, which doubtless contributed somewhat to his recovery, most certainly tended not a little to enhance my own interest in his well-doing.

From this date, however, matters began to mend. The sloughs separated; a healthy discharge soon after set in; the immense mass commenced to contract in dimensions; the grave constitutional symptoms disappeared; the pulse strengthened; and he recovered without a single subsequent untoward complication. The incisions have now (Feb. 9th) healed, and the scrotum has all but assumed its normal size as well as appearance. In fact, the cure is complete.

The occurrence of such a concatenation of events as that just narrated, in a young and strong male adult, should, I think, make the practitioner pause before unhesitatingly receiving this mode of treatment as one unattended with risk, or devoid of pain; and whilst I am aware that Mr. Pollock, at St. George's Hospital, has met with great success and encouraging results as set forth in The Lancet, I am nevertheless, cognizant of the circumstance of other surgeons not having a like amount of favorable experience to boast of, two instances having been lately recorded of consequences very similar to those which befel my patient—effects so serious as to compel me, at all events, to ponder well before I again subject an individual under my charge to their possible supervention, in spite of my not as yet having heard of any instance of their fatal termination.

I write this communication with some diffidence, bearing in remembrance the advice given, in his lectures to his pupils, by the late Sir Astley Cooper, to beware of calling the results of two or three cases *experience*; but as it is impossible to arrive at any satisfactory conclusions, unless the record of a large number of examples is laid truthfully before us, and as frequently quite as much, if not more, good is derived from the promulgation of untoward, as from the enunciation of successful practice, I hope the profession will believe me to be solely actuated by the wish of adding one other particle to the general mass of authenticated experiment.

Curragh Camp, 1860.

OBSERVATIONS
ON SOME
RARE SURGICAL ACCIDENTS.

By Weeden Cooke, Esq., M.R.C.S.,

Surgeon to the Royal Free Hospital and to the Cancer Hospital.

SUPPURATION OF THE KNEE-JOINT AND PYÆMIA SUBSEQUENT TO FRACTURE OF THE PATELLA; RECOVERY.

A transverse fracture of the patella is so seldom followed by any evil result, or the records of such cases are so scanty, that I have been unable to find more than two or three at all resembling the very remarkable case I propose briefly to report. Sir Astley Cooper mentions the case of a woman who had ulcers on various parts of the body, and one of these formed on the integuments immediately over the ligament which united a previously fractured patella. The ulcer became sloughy, and extended through the ligament into the joint; violent constitutional irritation ensued, suppuration was set up, and no opportunity was given of amputating the limb, owing to the swollen and inflamed state of the thigh; as a consequence, the woman died. Sir Charles Bell also relates the sad sequel of a case of simple fracture of this bone. He says, "I have seen a very terrible accident follow the imperfect cure of a fractured patella. The bone had united by ligament, and this ligament had incorporated with the skin in such a manner that it lost much of its pliancy. The poor man was carrying a burden, and fell backward. The knee sank under him, and the whole fore part of the joint was laid open by laceration. The case terminated in amputation of the limb." Mr. Ferguson and others have put on record cases showing the result of compound fracture of this bone, but it is of the sequelæ of simple fracture alone that I would speak in this short paper.

As a rule, we find that the ligament uniting the fractured portions of a patella goes on for two or three years diminishing in length and obtaining a firmer consistence, so that in many instances the patients declare that there is scarcely any loss of power in the limb, and that they can walk and even jump almost as well as before the injury. No doubt the constitutional powers of the patient have much to do with this consolidation of the uniting medium, as was shown in the case of a weakly man who came under my care about a twelvemonth ago. It was a case of transverse fracture, and did very well, the distance between the fractured portions not being more than an inch when he was discharged from the hospital. Two months after, he met with another fall, and was readmitted with the uniting ligament quite torn away from the inferior portion of the bone. A figure of 8 starch bandage was reapplied, and union was again very soon obtained, since which I have seen nothing of him. In the case I am about to relate, the man was also a spare, badly-nourished person, accustomed to very hard labor.

T. S——, aged thirty-five, a carman, was admitted to the Royal Free Hospital on September 24th, 1859, under my care. Eighteen months previously he had fractured the patella transversely, and was then in the hospital under my care. The treatment was cold affusion, the V-bed, and, after five days, the starch bandage, by which means he was enabled to go out of the hospital in three weeks. The starch bandage was continued for three weeks longer, and then the union was so complete that the upper portion of the bone could scarcely be moved upon the lower. He has since that continued his work without any inconvenience until September 2nd, when, without any assignable cause, he was seized with great pain in the knee during the night; much inflammation subsequently set in, and he remained at his own home under treatment until the date of his admission. It was then found that suppuration had ensued, and that the uniting ligament was absorbed. The two protions of the patella were separated some four inches; there were three small openings above and around the knee, communicating with the interior of the joint, and discharging freely unhealthy purulent matter. The pulse was small and rapid; tongue dry and very red. He had cold perspirations, and suffered great pain. Fortunately the poor fellow was able to take his food tolerably well, and I therefore allowed him full diet, with port wine and stout, the medication being tincture of bark and hydrochloric acid, with linseed poultices to the knee. In a few days the inflammation subsided at the knee, and the purulent discharge became less; but on October 3rd an abscess pointed at the inner side of the calf, from which by incision I drew off two ounces of laudable pus. From the same opening on the 5th nearly half a pint of pus was obtained by passing a probe to clear the passage. On the 8th, another large quantity of pus came away in the same manner, mixed with clots of black blood. Tents were now kept in this wound and in the openings below the knee, and much sanguineo-purulent matter continued to be discharged.

For three weeks there was scarcely any change in the condition of the limb, but the powers of life did not fail, and all the time he took his food and stimulants freely. At the beginning of November, the discharge began to diminish and the wounds to heal. In the middle of this month he had an attack of subacute inflammation of the wrist and shoulder joints, but his general health was not much affected by it. On the 3rd of December, these joints were well again, the wounds were nearly healed, and the discharge trifling.

Dec. 12th.—Wounds all healed; no pain in the leg, which is of course quite stiff; and he is getting about with crutches. The left hand and wrist are now swollen and painful.

19th.—Able to stand on the injured leg; some swelling of the right wrist.

28th.—Discharged quite well; no pain of joints; able to get about with one crutch.

Chlorate of potash was added to the bark and acid when the joint affections came on, and it seemed to act very beneficially. The healing of the wounds was also much hastened, when the active disease had subsided, by encasing the knee and leg in strips of lint spread with soap cerate. No bone came away during the progress of the case, and the upper portion of the patella remained separated from the lower portion by a space of between three and four inches.

The obvious moral to be derived from this case is never to despair of the curative powers of Nature, so long as the wear and tear can be supplied by sufficient nourishment. Here was a case of suppurative inflammation of the most important joint in the body, followed by pyæmia, in which life and limb were both saved by a little surgical management, and a good deal of constitutional support. Perfect rest to the limb, and immediate evacuation of pus whenever and wherever it presented itself being all the surgical interference that was called for; whilst the few medicines employed may fairly be looked upon as dietetics, or, at any rate, as condiments provocative of appetite for the food which was to effect the cure. In days now happily passing away,—let us hope for ever,—the alarm created by the formation of pus in the knee-joint after an injury would have induced the surgeon to advise amputation of the limb in order to save the life of the patient. Even in this case had the *cacoethes detruncandi* been strong upon me, there was a time when that resource seemed to be justified; but having a firm trust in the healing powers of Nature, and a patient with a cheerful disposition, we were fortunately enabled to weather the storm without throwing overboard any part of our valuable cargo.

Upper Berkeley-street, 1860.

ON A CASE OF

RHEUMATIC OPHTHALMIA OF LONG STANDING TREATED WITH THE CONTINUOUS GALVANIC CURRENT.

By Harry Lobb, Esq., M.R.C.S.

R. J—— had suffered for more than fifteen years from repeated attacks of rheumatic ophthalmia, through which the pupil of one eye had become permanently contracted, and the sight of the other much injured. Being warned that a repetition of these attacks would be followed by total loss of sight, he was led to consider whether some means of prevention hitherto untried might not exist. He had found by experience that galvanism applied to the limbs removed rheumatic pains; he therefore thought that a modified current applied to the eye at the commencement of an attack might prevent its occurrence, and if applied for a sufficient length of time the cure might be permanent.

On the approach of the next attack, he accordingly applied an excited thirty-six link Pulvermacher chain, the positive pole upon the spine, the negative upon the closed eyelid, upon retiring to rest. This was allowed to remain on during the night. In the morning, every trace of the disorder had vanished.

Other attacks followed at gradually increasing intervals of time, but they were invariably arrested by the same means, the consequence being, that during the last five years R. J—— has found that his eyes have been gaining strength, enjoying the uninterrupted use of his sight during the whole time.

The above case, communicated by the patient himself, requires no comment from me, as it is related in so plain and straightforward a manner. At the same time, I may corroborate it by stating, that in all cases of ophthalmia for which I have used the continuous galvanic current a rapid cure has been effected.

Brook-street, Hanover-square, Sept. 1860.

REMARKS ON A

CASE OF PIARRHÆMIA ACCOMPANYING ACUTE DIABETES MELLITUS.

By Charles T. Coote, M.D. Oxon., F.R.C.P.,
Assistant-Physician to the Middlesex Hospital.

The pathology of fatty blood (piarrhæmia, pioxæmia, lipæmia) is still very uncertain. I avail myself of the following case (in itself of much interest) to point out, as nearly as may be, the present landmarks of our knowledge on this subject:—

A. G——, aged twenty-one, was admitted into the Middlesex Hospital on Nov. 3rd, 1859, under the care of Dr. Thompson. His history was as follows:—Six months before admission he had married, and, unfortunately, infected his wife with gonorrhœa. The ensuing domestic unhappiness occasioned a separation four months after marriage, *at which time he considered himself in good health*; but the circumstance preyed much upon his mind, and he became dull and low-spirited. *Three weeks* before admission, he first began to suffer from increased thirst, and at the same time noticed that he was voiding an unusual quantity of urine. From this period he had lost strength very rapidly. On admission, he was found to be in a state of alarming prostration, for which stimulants were freely administered, but without any good result. He continued to sink rapidly until the morning of the 5th of Nov., when he died. During his first twenty-four hours in the hospital he had passed five pints and a half of urine, acid, specific gravity 1031, and containing sugar.

Autopsy, eight hours after death.—Weather damp. Rigor mortis considerable; body not at all emaciated; diabetic odor perceptible. On the brain being removed, about four ounces of pellucid serum were discovered at the base of the skull. Immediately upon exposure to the air, this fluid became opaque, and its surface was shortly covered with a thin milky pellicle. This was set aside for examination. The blood, as it escaped from the opened sinuses, was fluid, homogeneous, and of a dull-red color, like raspberry cream; but, in a very few seconds, it separated itself into two distinct portions, the supernatant layer being of the color and appearance of thick, white cream, the subjacent presenting the usual appearance of fluid venous blood. For the purpose of further examination, blood was collected from the sinuses of the brain, from the innominate vein and right ventricle, from the hepatic veins, and from the splenic vein. None could be obtained from the portal, nor from the superior mesenteric, veins.

These specimens were allowed to repose, and were examined the next morning. The general results were as follows:—

1. With the exception of a very small, non-adherent clot in the right ventricle, the blood was fluid in every part of the body examined.

2. The supernatant creamy fluid was found in every specimen, *except that from the splenic vein.*

Examined under the microscope, it appeared almost perfectly *homogeneous*. It contained *no oil-globules*; no cells (except a few scattered blood-corpuscles); and showed no trace of coagulated fibrin. Here and there were a few faint indications of amorphous granular matter, probably molecular albumen (?) *It was wholly taken up by ether.* The exact determination of its quantity was, unfortunately, not attainable; but it may be roughly estimated from the fact that, in a conical test-glass, the creamy layer occupied one-third of the whole.

3. The subjacent layer presented the usual appearance of *fluid* venous blood. Neither in that from the splenic vein, nor in that from any other part, was there the least trace of a clot, even after forty-eight hours. It contained the usual proportion of red and white blood-corpuscles, apparently of a normal character.

4. The reaction of the serum was *neutral*; it had no effect upon the color of blue or of reddened litmus.

5. A volatile alkali was driven off by heat, which restored the color of reddened litmus. This reaction, however, was afforded much more readily by the splenic blood than by any of the other specimens.

The remaining post-mortem appearances were as follows:—The brain (with medulla oblongata) weighed forty-nine ounces and a half. It was pale, and of extremely firm consistence, as though hardened in spirit. Under the microscope, however, its structure appeared to be perfectly normal. The muscular structure of the heart was of a pale rose-red color. The right ventricle contained a very small, nearly colorless, non-adherent clot. All the valves were healthy. The upper lobe of the right lung contained a mass of crude yellow tubercle as large as an orange; this was surrounded by a distinct layer of pigment, and showed no signs of softening. The left lung was œdematous. The liver weighed sixty-eight ounces and a half; it was of an ashen-grey color, and very friable; but microscopic examination showed no other change than an excess of fat in the liver cells. The spleen (three ounces and a half) was small and pale; it contained one dark-colored fibrinous deposit of the size of a hazel-nut. The mesenteric glands were not enlarged. The kidneys (each six ounces and a half) were large and flabby; the capsules non-adherent; the surface pale, faintly mottled; the structure coarsely striated. The supra-renal capsules were quite healthy.

This seems a well-marked case of diabetes mellitus excited by psychical causes in a person of tuberculous constitution. It is not often that diabetes is distinctly referable to such a cause. Amongst the fifty one cases recorded by Oppolzer and Heller, (Heller's Archiv., 1852, hft. xi.) *fear* is assigned as the exciting cause in four instances. The extreme rapidity with which the disease ran its course is very remarkable. The ordinary symptoms of diabetes (thirst and polyuria) had existed for only *three weeks*, and that probably in no great degree, as the patient on admission was passing only five pints and a half of urine per diem. It is, of course, probable that the function of the liver had been disordered, and that the disease had been latent, for some time. But even thus it is impossible to assign to it a longer duration than *two months;* for at that period the man considered himself in perfect health. The most rapid case recorded by Oppolzer ran its course in three months. And this extreme rapidity serves to explain why, with such intense prostration, no emaciation was present; for (as we may observe in fever) it takes a much longer time to lose flesh than to lose strength.

The creamy layer which formed on the surface of the blood in this case consisted obviously of free fat, for it was wholly taken up by ether. Such a pellicle on the surface of the *serum* is not uncommon, nor, indeed, wholly abnormal; but it is rare to meet with it, as in this instance, overlying uncoagulated blood. The only similar case, so far as I know, is that recorded by Leubuscher, (in Virchow's Arch., bd. 18, hft, 1, s. 124,) in which it is stated that "a portion of the white serum which stood in a test-glass, *above the red portion of the blood*, was shaken with ether, and almost entirely dissolved

In both these cases the peculiarity must have been due to the absence of coagulable fibrin. There is on record another case of fatty blood (Lecanu's) in which the fibrin is stated to have been entirely wanting; but no account is given of the appearance of the blood. In this and in some few other points, this case is exceptional. Otherwise, it belongs to the extensive class of cases of "milky serum," under which head it may be more conveniently considered.

I.—The *physical causes* of milky serum are two —free fat, and molecular albumen.

In cases of leucæmia, also, the serum may be lactescent from an excess of colorless blood-corpuscles. But as this appearance is presented only by the *defibrinated* serum, leucæmic blood may be excluded from this inquiry.[*]

A. Free fats. These belong (probably always) to the *saponifiable* group. In one case, indeed[†] (Lecanu's), *cholesterine* is stated to have been present in the enormous proportion of 108 in 1000 parts. But as the saponifiable fats were also in excess (9 in 1000), the lactescence of the serum may have been due to these.

The saponifiable fats of the blood (very variable in amount, but which may be roughly estimated at 1 in 1000),[‡] exist in the form of an emulsion with the free alkali of that fluid. Should they, however, be in excess of the emulsive power of the alkali, or should the alkali be (as in certain cases of disease) deficient the fat must necessarily appear in a free state, and, on standing, rise like any other cream to the surface.

The form in which it nearly always appears is that of *oil-globules*, as was first noticed by Hewson.[§] In the present case it was perfectly homogeneous; and some similar instances have been observed by Professor Virchow.[‖] These are, however, exceptions to the rule.

B. *Molecular albumen.*—That lactescence of serum is sometimes due to another cause than free fat was first observed by John Hunter;[¶] but the fact was ignored or misapprehended until the more recent researches[**] of Simon and Scherer, Buchanan, and R. D. Thomson, placed it beyond question. These chemists found that turbidity of serum was (in some cases) partly occasioned by the presence of a molecular substance, not soluble in ether, but presenting an albuminous reaction. To this substance Simon and Scherer gave, rather hastily, the title of molecular *fibrin*. It is now generally spoken of as molecular albumen.

This substance forms no cream on the surface of the serum, but remains suspended in the fluid, thus rendering it *permanently* opaque, and so readily distinguishable from serum turbid from the presence of free fat *alone*. But frequently the two conditions are combined; the molecular albumen being associated with fat, either in a free state, and so rising to the surface of the turbid serum, or *included* in the substance of the albuminous molecules, from which it may be set free by chemical reagents.

It is, indeed, very questionable whether lactescence of serum is ever due to molecular albumen *alone*. Some cases are, however, recorded by the late Dr. Bostock[*] in which the milky serum is described as containing "no proper oily matter," *although a creamy layer rose to the surface*. It is possible that in these cases the albumen was floated by means of included fat. Another extremely obscure case, but perhaps referable to this category, is one which has been repeatedly, but unaccountably, cited as one of fatty blood. It is known as Caventou's case.[†] In this the blood was permanently opaque; no cream appears to have formed on its surface; it was of neutral reaction, and *coagulable by heat*. A precipitate was thrown down by tincture of galls, but none by Hg. Cl_2. and very little by acids or alcohol. Caustic alkalies produced no effect upon it. The interpretation of this case is certainly difficult; but it seems most probable that the lactescence was due to more than one cause, and that one of the causes was the presence of albumen in some peculiar chemical state.

With these exceptions, molecular albumen appears to be always accompanied by *fatty* disease of the blood.

II. *Pathology of Milky Serum.*—Milkiness of the serum has been long known, by the researches of Thackrah, Buchanan, R. D. Thomson,[‡] and others, to be an ordinary physiological event attendant on the digestion of fatty or amylaceous aliment. Its occurrence during *pregnancy*, also (in which all the formative elements of the blood are increased), and in the blood of sucking animals, was shown by Mayer;[§] and lactescence of the serum has been found to occur in some animals during hybernation.[‖] In all these cases, the milkiness is due both to fat and to molecular albumen. In pregnancy, the white blood-corpuscles are also in excess.[¶]

But milkiness of serum has been still longer known as an accompaniment of certain forms of disease. The recorded cases (the earliest of which we owe to the celebrated Robert Boyle[**]) unfortunately do not admit of any accurate numerical analysis, but I believe that the following summary will be found approximatively correct.

(*a.*) The great bulk of the cases have occurred in connexion either with alcoholism or with diabetes mellitus.

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[*] Virchow's Cellularpath., s. 155.

[†] Gaz. des Hp., 1835, Avr., 20-24.

[‡] Becquerel and Rodier,—Recherches, &c., p. 23.

[§] Exp. Enq., p. 148; or Gulliver's ed., p. 82, seq.

[‖] Virchow's Gesammelte Abhundlungen, s. 138.

[¶] J. Hunter on Blood, &c., ed. 1794, pp. 37-39.

[**] Simon, Méd. Chimie, ii., 220. Beitrage zur Chimie, i., 2.87 Scherer, Chem. u. Mikroskop. Untersuch., ss. 81, 85. Buchanan, London Medical Gazette, 1845, p. 1027. R. D. Thomson, (cited rom Canstatt's Jahresb., 1845, bd. i.

[*] Bright's Rep. of Med. Cases Vo38M. .i. 1,.

[†] Annales de Chimie, t. xxxix. p. 288. (Ser. II. 1828.)

[‡] Thackrah on the Blood, 1834, p. 129. Buchanan and Thomson. l. c.

[§] Froriep's Notizen, No. 565. .1830.

[‖] Wedl's Grundzuge, s. 61.

[¶] Virchow's Cellularp., l. c.

[**] Philosoph. Trans. Abridged, vol. iii. p. 234.

Of alcoholism, nine cases[*] are recorded. To these must be added the *unenumerated* cases of J. Frank.

Of diabetes,[†] seven cases are published (including the present). To these must be added the *unenumerated* cases of Dr. Babington.

Next in order come *pulmonary*[‡] diseases, of which there are six cases on record.

Of albuminuria,[§] *one case* is given by Dr. Christison; "several" are alluded to by Dr. Bostock.

The hæmorrhagic[‖] diathesis appears to have been observed in four instances.

Morgagni gives[¶] two cases of "malignant fever." The diagnosis in these is not free from doubt.

One case has been observed accompanied by peritonitis;[**] and one by gout. John[††] Hunter[‡‡] saw a case in which fatty blood was taken from a man bled for an injury to the head. This was no doubt an accidental coincidence.

Finally, in seven of the recorded cases,[§§] the clinical history is either wholly absent, or too vague to allow of diagnosis. (R. Boyle (3), Traill, Caventou Mareska, Quevenne.)

(*b.*) It is observed that in most, if not all, of the cases of *alcoholism*, the lactescence of the serum was occasioned by *free fat alone*.

It would also appear to have been due to the same cause in all Dr. Babington's cases of diabetes, in those of Marcet and Rollo, and in the present instance. Dr. R. D. Thomson saw a case of diabetes in which molecular albumen also was present. Darwin's and Abernethy's cases are uncertain. In Leubuscher's case, lactescence was caused by free fat *and an excess of white blood-corpuscles.*

In the pulmonary group it seems to have been caused by fat alone in four cases. In one (recorded by John Hunter), albumen was also present; in another (by Mr. Gulliver), a yellow precipitate *fell* on addition of ether. It is probable that this consisted of albumen previously held in suspension by combined fat.

The cases in which molecular albumen appears to have been present in considerable quantity are these two (of pulmonary disease), *all the cases of albuminuria* mentioned by Dr. Bostock, the uncertain case recorded by Dr. Traill, and the solitary instance of gout.

(*c.*) The serum has been analyzed in several cases. Of the analyzes, the most important are those of Traill, Lecanu, Bertazzi, Mareska, and Heller. The general results are as follows:—

a. In one case (Bertazzi's), the only peculiarity consisted in the presence of an excess of fat (10 : 1000) at the expense of the other elements of the so-called "extractive." In all the others the *solids* of the serum were in excess, varying from 164 : 1000 to 206 : 1000. The normal average proportion, according to Scherer, is 93·4 : 1000. Notwithstanding this fact, the specific gravity of the serum was *below* the average (1028) in Heller's and in Traill's cases, and apparently in all Dr. Babington's.

b. *Fat* is, of course, in excess in all these cases. It varies from 24·4 : 1000 (Traill) to 117 : 1000 (Lecanu). In this case, however, the enormous excess is made up by 108 parts of cholesterine. The greatest amount of *saponifiable* fat recorded is 50·473 : 1000 (Heller).

c. The proportion of *albumen* is not constant. Scherer's average for healthy serum[*] gives 75·2: 1000. Bertazzi's case nearly corresponds with this standard. Two cases (Mareska's and Lecanu's) fall *below* it (64 : 1000.) The other two exceed it very considerably (108·791 : 1000, Heller; 133·1 : 1000, Traill.)

d. In two instances, (Mareska's and Caventou's) the reaction of the serum was *acid.* In the present case and in Leubuscher's, it was *neutral.*

In Leubuscher's case, no free NH_3 was extricated from the blood by heat. In the present case a volatile alkali was so liberated, but much more copiously from the splenic than from the hepatic (or *fatty* blood).

(*d.*) The fibrin and red corpuscles of the blood have been estimated in only one analysis, (Heller's.) The former amounted to 4·72 : 1000, (about double the average;) the latter to 80·13 : 1000, (the average being 141·1.)

In the present case, in Lecanu's, and apparently in Leubuscher's, there was an almost total deficiency of coagulable fibrin.

In Leubuscher's case the white blood-corpuscles are stated to have been in excess.

(*f.*) Such, I believe, are the principal *facts* ascertained with respect to milkiness of the serum or of the blood, not dependent upon lucæmia.

Briefly, the results are as follows.—

1. Milkiness of serum (or blood) is due to presence of free fat, or of free fat with albumen in a molecular form. It is probably never due to molecular albumen *alone.*

2. It is a *physiological* result of digestion, pregnancy, lactation, and hybernation.

3. It is an occasional *pathological* result of chronic

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[*] The cases of Alcoholism are as follows:—Hewson (3), l. c. Stuart, Philos. Trans. Abr., v. ix. p. 193. J. Hunter, l. c. Zuccarelli, (Anal. by Bertazzi,) Omodei Annali, 1835. Apr. e Magg. Schmidt's Jahrb., x., 146. Muller, Archiv., 1846. Rosch, Schmidt's Jahrb., 1842. Macpherson, Brit. and For. Med-Chir. Rev., 1859, xxiv. J. Frank, Hannoversche Annalen, 1847.

[†] The cases of Diabetes Mellitus are as follows;—Dobson (Ap. Marcet de Diabete). Rollo on Diabetes, ed. 1806, pp. 20, 21. Abernethy (quoted by Rollo, ibid. p 145). Darwin (ibid. p. 36. Zoonom. v. vi. p. 318.) Babington, Med.-Chir. Trans., 1830, vol. xvi. R, D. Thomson, loc. cit. Leubuscher, loc. cit,

[‡] Pulmonary Diseases;—Hewson, loc cit. Hunter, loc. cit, Zuccarelli, loc. cit. Lecanu, loc. cit. Rosch, loc. cit. Gulliver, App. to Gerber's Anatomy, p. 21.

[§] Albuminuria:—Christison, Edin. Med. and Surg. Trans. 1829. Bostock, Bright's Reports, l. c.

[‖] Hæmorrhages:—Tulpius, lib i. cap. 58 (1743). Hewson (2), l.c. Chatin and Sandras, Gas. des Hop., 1849, No 72.

[¶] Morgagni, Ep. xlix. Art. 22.

[**] Heller, Archiv., 1844, s. 5.; and Simon's Anim. Chem., Trans. Syd. Soc., p. 271.

[††] Personne and Deville, Arch. Gen., Ser. iv., t. i. p. 94.

[‡‡] Hunter, l. c.

[§§] R. Boyle, Phil. Trans., l. c. Traill, Edin. Med. and Surg. Trans., 1821—1824. Caventou. Ann. de Chim., l. c. Mareska Schmidt's Jahrb., 1837. Quevenne, cited by Canstatt, v. i. 1845.

[*] Gorup-Besanez, Anleitung, &c., s. 287.

alcoholism, diabetes, mellitus, pulmonary disease, albuminuria, and, perhaps, some other disorders.

4. Lactescence of serum from free fat *alone* appears especially to accompany alcoholism and diabetes mellitus. The conditions favoring the presence of molecular albumen are still very obscure; they appear related in some way to albuminuria.

5. The serum is sometimes neutral and sometimes acid in this disease. It may contain no free alkali.

6. The albumen of the blood may be normal, or defective, or in excess.

7. Coagulable fibrin is *sometimes* entirely absent, or nearly so.

8. *In the present instance* the source of the fat in the blood was *the liver.*

(*g*). Before attempting to construct upon this foundation an hypothesis which may give a probable explanation of fatty blood, it may be worth while to review, very shortly, the few opinions which have been already promulgated upon this subject.

The earlier observers, from Robert Boyle to Hewson*, were unanimous in referring "white blood" to the passage into the circulation of unaltered chyle, or even (as Tulpius †) of unaltered aliment. This opinion was indeed true, but only half-true; and its insufficiency was demonstrated by Hewson‡, who observed several cases of disease, accompanied by milky serum, in which the patients had taken little or no food for several days.

From this period the subject appears to have remained in abeyance, until Caventou's case§ gave a new and purely chemical turn to the inquiry. In this case the serum had an *acid* reaction; and upon this fact Raspail based an explanation by no means devoid of plausibility. He held that the fat was set free in the blood for the want of a free alkali to hold it in the form of a soap.

This view is obviously true *so far as it goes;* but it seems almost to imply a confusion of cause and effect. Acidity of the blood is, doubtless, capable of setting free all the saponifiable fats normally present in that fluid, (say 1 : 1000;) but it cannot *create* fat. The hypothesis is, therefore, quite inadequate to explain the presence of the large amounts of fat in the blood noted in the previous analyses.

It seems, therefore, far more reasonable to suppose that the excess of fat had exhausted the free alkali of the blood, than that the abstraction of any amount of alkali could have liberated such enormous quantities of fat. This doctrine has, nevertheless, held its ground, and has contributed not a little to the so-called "alkaline" treatment of diabetes mellitus.

The next opinion which I have to notice is that of Dr. Babington,‖ to whom the literature of this subject is so highly indebted. This distinguished observer seems to have been disposed to regard piarrhæmia as a true fatty degeneration of the albumen of the blood, basing his views partly upon the low specific gravity of the serum in these cases, (which he had been the first to observe,) and partly upon the peculiar case recorded by Caventou, in which it was erroneously supposed that no albumen was present in the blood at all. But it has been already shown, that the *specific gravity* of the serum is no indication of the amount of albumen which it contains; that in Caventou's case, the lactescence, if not due to albumen, was certainly not due merely to fat, and that, in two cases at least, both fat and albumen were present together, and both in large excess. This explanation must, therefore, it seems to me, be abandoned.

Another has been proposed by Rokitansky,* also based upon the idea of fatty degeneration. He thinks milky blood due, "in a considerable number of cases," to fatty degeneration of the colorless corpuscles of the blood, previously formed in excess in that fluid. He regards it, therefore, as a modification of leucæmia; and supports his opinion by the statement that milky serum *has been generally observed under circumstances ordinarily accompanied by an excess of white corpuscles.*

This statement, however, seems to require considerable modification, at least so far as regards cases of disease. In one, indeed (Leubuscher's), the colorless corpuscles are said to have been in excess; and in four of the earlier cases, that hæmorrhagic tendency was noted which so often accompanies leucæmia. But, with these exceptions, the diseases attended by fatty blood (alcoholism, diabetes, pulmonary disease) are *not* those especially related to leucæmia; and the pathological changes most constantly noted in leucæmia (enlargement of spleen and mesenteric glands,) appear never to have been observed in cases of fatty blood. In the subject of this paper the spleen was remarkably small, and weighed only three ounces and a half. Rokitansky, however, also allows the direct introduction of fat into, and the liberation of combined fat within, the blood to be possible causes of milky serum.

The only remaining opinion which requires notice is that of Virchow, who has treated the subject quite incidentally in a note† to his valuable memoir upon Fibrin. He regards milky serum, in pathological cases, as essentially dependent upon the *non-elimination* (non-combustion) of fat, and its consequent accumulation in the blood. The appearance of molecular albumen he appears to consider only a secondary phenomenon; the slow saponification of the excess of fat abstracting from the albumen of the blood the alkali required to keep the latter in solution.

The first half of this explanation is certainly, in many cases, correct. The other involves some difficulty; for, if it be true, it seems impossible to account for the occurrence of large quantities of free fat, in acid or neutral blood, *without* the presence of molecular albumen, as was the case in three of the instances collected above.

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* For a list of the authorities on this subject, previous to Hewson, see Mr. Gulliver's note to p. 82 of his edition of Hewson's works.

† Tulpius, Observ., lib. i., cap. 58.

‡ Exp. Enq. p. 148, or Gulliver's ed., p. 62, seq.

§ Annales de Chimie, ser. ii., t. xxxix., p. 288.

‖ Med. Chir. Trans., vol. xvi.; Cycl. Anat. and Phys., Art. Blood.

* Path. Anat., ed. iii., 1855, bd. i., s. 384.

† Gesammhlte Abundlungen, s. 140 e

The conclusions which I should venture to draw from a comparison of the facts collected in this paper are as follows :—

1. Piarrhæmia consists in an excess of saponifiable fat in the blood, not in the mere liberation of fat from its combinations.

2. The excess of fat in the blood may be the result of two causes—viz.:

(*a*) The excessive ingestion of fat (as in piarrhæmia during digestion).

(*b*) The diminished elimination of the same (as in hybernation and pulmonary diseases).

It is not quite clear to which of these categories alcoholism belongs. It is *conceivable* that its elements may be *directly* converted into fat by deoxidation ; but it seems more probable that the conversion is effected *indirectly*, the hydrocarbon of the alcohol attracting to itself that free oxygen which would otherwise have been employed in the combustion of the fats of the food, and so permitting the accumulation of the latter in the blood.

3. Fat, if directly ingested, may enter the blood with the chyle through the thoracic duct ; but it is clear from the present case that it may also be elaborated in, and absorbed directly from, the liver.

4. Piarrhæmia is not a *result* of diabetes mellitus, for either may exist without the other. Both seem to be consequences of the same derangement of the functions of the liver which overloads the blood, sometimes with an excess of sugar alone, sometimes with an excess of sugar and fat combined.

Why the liver should deal so differently in different cases with the hydrocarbons submitted to its influence it is hard to say. It seems not improbable that sugar alone is elaborated in the first instance, and that the excess of fat is the result of a deoxidation of this substance; for the conversion of sugar into fatty substances is not only capable of being effected experimentally (as in the production of butyric acid by fermentation of sugar under the influence of casein), but has been shown to take place in the animal economy, in the formation of wax by bees fed only on sugar.*

5. The pathology of blood milky from molecular albumen must be considered as still almost wholly negative. It is probably never an independent affection ; but neither is it a mere accidental consequence of piarrhæmia. Its apparent relation to albuminuria seems to point to some organic change in the constitution of the plasma of the blood itself.

Gloucester-place, Hyde-park, Sept. 1860.

Men and Apes.—An anecdote of the discussion at the British Association, on Mr. Darwin's book, is current. The two most prominent speakers on either side were the Bishop of Oxford and Mr. Huxley. "If I may be allowed to inquire," said the Bishop of Oxford, "would you rather have had an ape for your grandfather or grandmother?" "I would rather have had apes on both sides for my ancestors," replied the naturalist, "than human beings so warped by prejudice that they were afraid to behold the sun."

A Mirror
OF THE PRACTICE OF
MEDICINE AND SURGERY
IN THE
HOSPITALS OF LONDON.

Nulla est alia pro certo noscendi via, nisi quam plurimas et morborum et dissectionum historias, tam aliorum proprias, collecta, habere et inter se comparare.—Morgagni. *De Sed. et Caus. Morb.* lib. 14. Procemium.

KING'S COLLEGE HOSPITAL.

WOUND OF THE WRIST; DEATH FROM TETANUS OCCURRING FOURTEEN DAYS AFTER THE ACCIDENT.

(Under the care of Mr. Fergusson.)

The history of tetanus shows that the causes which give rise to the traumatic form are chiefly minor surgical injuries, such as a scratch from a rusty nail in the foot, punctures, lacerated wounds of the feet or hands, fractures of the fingers and toes, injuries to the wrists or ankles, and burns on the trunk. Sometimes tetanus supervenes upon some of the major operations ; but it has been rare in comparison with the smaller. Of five examples of this terrible disease which we place upon record on the present occasion, four were traumatic, following respectively a wound in the wrist, the removal of a scirrhous breast, a compound dislocation of the ankle-joint, and wound of the sole of the foot from a rusty nail. In one only did a recovery take place, probably assisted by the administration of aconite. The fifth example is one of the very rare form of idiopathic tetanus.

In the consideration of tetanus, it is melancholy to reflect that recovery is the rare exception, and fatality the almost invariable rule. If, however, the disease should last beyond a certain number of days, the symptoms become milder, and there is a prospect of recovery. So long as the true nature of tetanus remains an unsettled question, we fear that all our efforts at rational treatment must prove uncertain. No pathological changes have been noticed in the brain or spinal cord which can be said conclusively to be the cause or consequence of the disease. It has been called "functional disease of the spinal cord," for the want of some better name. In the traumatic form of the affection, the minute nervous twigs have been discovered diseased at the seat of the wound ; and as throwing some light upon this part of the subject, we quote the following lines from Mr. Erichsen's "Practical Clinical Remarks on Tetanus," published in a previous volume of this journal (vol. i., 1859, p. 355 :—)

"Yet there is in traumatic tetanus, I believe, always a certain condition of the nervous system to be met with if carefully looked for—namely, an unhealthy state of the nervous branch, or twig, running from the wound. This twig will be found implicated in some way, congested, inflamed, infiltrated ; its neurilemma thickened, softened, and discolored, often for a considerable distance from the wound. I have never failed to find this when it has been carefully looked for. In the present instance a cutaneous branch was found lying bare, and inflamed in the bottom of the issue-wound. In many other cases I have seen the same."

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* Miller's Chemistry, vol. iii. p. 738.

The mischief commences in a minute nervous twig, and by reflex action those powerful changes are effected which characterize the disease. It is quite clear that the nervous system is the one at fault, although the true nature of the affection is unknown.

The variety in the treatment recommended by various observers shows that some consider it inflammatory, whilst others look upon it as essentially nervous. Venesection was recommended in this disease as early as the time of Hippocrates. The anodyne and antispasmodic plan of treatment, on the other hand, has lately received an extensive trial, but with results that cannot, so far, be wholly depended upon. If we take woorara as an example of a remedy that has thus been brought into notice, we shall find that it has failed to meet the expectations of those who employed it, except in a few instances. The last occasion we saw it used was in a boy, aged ten years, at St. Bartholomew's Hospital, under Mr. Lloyd's care, admitted with trismus coming on seven days after inflammation of the left great toe from a contusion. The genuine woorara (obtained from Morson) was given hypodermically every fifteen or twenty minutes, beginning with one-twentieth of a grain, gradually increasing the dose until as much as a grain had been injected two or three times. Some diminution in the severity of the spasms took place; but the boy suffered so much when the skin was punctured that his mother refused to permit its use any longer; when this occurred about six grains altogether had been injected. The next day the boy died; but whilst under treatment he was able to swallow, and the spasms did not come on after drinking. In the first of the following cases the extract of woorara was unsuccessfully given, as well as the aconite.

Of other remedies to which the cure of individual examples has been attributed, we may mention tobacco, nicotine, aconite, atropine, and belladonna; conium, henbane, and Indian hemp; opium, camphor, and stimulants. Dr. Williams relates a cure by means of 110 bottles of port wine in forty-two days; Mr. Ilott cured a case with two gallons of brandy in eight days. Mr. Simon considers tobacco one of the best anti-tetanic remedies we possess; and we remember a case at St. Thomas's Hospital, in May, 1858, under his care, cured by nicotine. Patients have been cured by the division of the trunk of the affected nerve high up in the limb, so as to get beyond the sphere of local irritation. This proceeding is not always practicable, and, like other measures, it has sometimes failed.

Any patient who has weathered the disease for a certain number of days stands a fair chance of recovery, for the malady wears itself out: the remedies employed late in the disease, therefore, cannot fairly receive the credit of having effected a cure. Nevertheless every surgeon is aware that chronic tetanus, in spite of all treatment, proves fatal at so late a period even as three weeks after its commencement.

Dr. Carpenter, of Suffolk County, New York, has cured sixteen out of seventeen cases of tetanus by the application of ice along the spine.* This is worthy of recollection in hopeless cases, when other means have been found useless.

For the notes of the two following cases we are indebted to Mr. William H. Wickham, house-surgeon to the hospital.

William L——, aged twenty-one, admitted July 12th, with a wound of the left wrist. He stated that ten days before his admission he cut this wrist with a knife whilst dividing the cords with which a sack was tied. The wound was about an inch and a half long, and extended over the lower part of the radius and the ball of the thumb. There was a great deal of hæmorrhage at the time, which was arrested by pressure; secondary hæmorrhage, however, occurred, and it was found necessary to apply a ligature to the radial artery on the cardiac aspect of the wound. This was done by the surgeon whose care he had been under, and in this state he was admitted into the hospital. The wound was then looking healthy, and discharging pretty freely. He was kept quiet in bed; and good diet was given, he being very weak from loss of blood.

On the 15th (three days after admission) he complained of a feeling of stiffness and soreness about the throat and neck, and on the following morning he was unable to open his mouth more than a quarter of an inch; this was attended with no spasm or pain, and he was able to swallow liquids without difficulty. He continued in this quiet state throughout the day; towards evening, however, the muscles of the face became rigid, producing the peculiar expression of countenance so characteristic of the disease. During the night, spasm of the muscles of the back and abdomen occurred, the attacks being frequent, but of short duration. At these times he perspired very freely, and the pulse was much more frequent and full.

On the morning of the 18th his general appearance was much worse, the spasms being more general and severe. About noon, the respiratory muscles also became affected, especially after attempting to swallow, the act of which was accompanied by great difficulty. He died at four o'clock, P.M. (fifty-six hours after the commencement of the attack.) The spasms which affected the respiratory muscles during this last attack were most severe, and the whole muscular system was more or less involved. During the whole course of the disease there was no impairment of intellect. All attempts to bring about reanimation proved unsuccessful.

At the outset of the attack a purge was given, and aconite, in frequent and increasing doses, was also exhibited. Through the kindness of Dr. Harley, some woorara poison (the extract) was procured, which was injected subcutaneously on several occasions; an enema of beef-tea, brandy, and quinine was given every four hours. Cold to the spine was also tried. No post-mortem examination of the body was made.

SCIRRHUS OF THE BREAST; REMOVAL: DEATH FROM TETANUS OCCURRING SEVEN DAYS AFTER OPERATION.

(Under the care of Mr. Fergusson.)

Isabella C——, aged fifty-one, married, was admitted on the 12th ultimo, with scirrhus of the right breast, the presence of which she noticed about nine months ago. The progress of the disease was slow, and accompanied by the ordinary symptoms. On admission, her general health was good, and there was a tumour of the right breast, about the size of a small orange; it was very hard, and involved the nipple. On July 14th, the patient being under the influence of chloroform, Mr. Fergusson excised the tumour. The disease had extended into the substance of the great pectoral muscle: a portion of which was consequently removed. The tumour was scirrhous; and, on making a section of it, several small cysts were discovered. On the following day the patient was very feverish, and complained of a great deal of pain and stiffness in the neighborhood of the breast. Suppuration was not yet established. In a few days, however, these symptoms had all subsided, and there was a purulent, though not very free, discharge from the wound. She continued to do well until the 21st of July, when she complained of stiffness and some pain in the neck and jaws, and the face became swollen and red. The countenance soon wore a peculiar expression; and by the evening of this day, the muscles of mastication became rigid, so that she could only separate the jaws about half an inch. There was no difficulty in swallowing. The wound looked well but the discharge was bloody and scanty. The patient had some good sleep during the night; but in the morning, after swallowing some liquid, she was seized with violent spasm of the muscles of respiration, and was for a time asphyxiated. In a short time the spasm subsided, and the patient recovered from its effects, remaining quiet for the rest of the day, the trismus, however, being more complete. About nine o'clock P.M., another attack, similar to the last, came on: and, during the night, several others of less severity occurred. She died at seven A.M. July 23rd, after an attack similar, but much more severe, than the preceding. Duration of tetanus forty-eight hours.

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* New York Journal of Medicine, Jan., 1860.

In this case, the muscles of mastication and respiration were the only ones affected, until a few minutes before death, when, in addition to these, those of the back and abdomen were violently contracted. The patient was perfectly sensible to the last. At the commencement of the disease a good dose of castor oil was administered, which acted freely. The extract of conium was then given, in three-grain doses, every two hours, the dose being gradually increased to six or seven grains. An enema (containing brandy, ten grains of quinine, and beef-tea) was given three times a day.

A post-mortem examination of the body was made, but with very unsatisfactory results. The muscles were rigid, and there was some slight vascularity of the cauda equina. The remaining portion of the cerebro-spinal axis was perfectly natural in appearance.

ST. BARTHOLOMEW'S HOSPITAL.

REDUCTION OF COMPOUND DISLOCATION OF THE ANKLE-JOINT; DEATH FROM TETANUS ON THE EIGHTH DAY AFTER.

[Under the care of Mr. Stanley.]

The notes of this case were taken by Mr. Rogers, house-surgeon to the hospital.

William M——, aged fifty-four, a man of quiet habits, and apparently of good constitution, was admitted on 3rd of June, having sustained compound dislocation of the ankle-joint, with fracture of the fibula. The accident was the result of a blow from the shaft of a cart, and occurred ten miles away in the country. The dislocation was reduced by a surgeon, and the limb placed in splints. He was then sent to St. Bartholomew's Hospital. On examination, the bones were found in good position. A back splint was applied, with a foot-board, and the whole secured by rollers. For some time he progressed most satisfactorily, but on the 6th a good deal of inflammatory swelling was noticed about the cellular tissue of the limb, and suppuration subsequently set in. On the 7th, it was observed that there was a great deal of cellular inflammation on the outer aspect of the thigh, and the veins of the limb were hard and tender to the touch. There was not, however, at this time any great constitutional disturbance. His tongue was clean; his pulse 84, and of moderate volume; his appetite, however, had failed somewhat. The propriety of amputation was now considered, but it was decided that an attempt should be made to relieve the patient by free incisions, which were made above the ankle. The parts were so gorged that a considerable quantity of blood (about a pint) flowed from the openings. Great relief to the symptoms resulted from this proceeding. The leg was slung as in a common fracture, and water-dressing applied to the wound. Brandy was given, and an anodyne draught at bed-time. The inflammation of the cellular tissue abated, and the veins of the limb became somewhat smaller. He continued to improve until the 8th, when, on going round in the evening, Mr. Rogers found that the patient complained of some stiffness about the jaws. There was some difficulty in opening the mouth, though the tongue could be protruded. The sterno-mastoid muscle on the right side was somewhat tense; that on the left was lax. There was no difficulty in swallowing, no spasms, and no tension of the abdominal walls. Aperients were given, and a larger dose of opium at bed-time. These symptoms, however, came on next day with great violence, assumed the characters of decided tetanus, and were attended with much distress. They increased in intensity, and on the 10th he died in a fit of spasm.

Autopsy.—The leg only was examined. There was a good deal of suppuration amongst the muscles. A large quantity of pus was found in the joint. The internal lateral ligament was lacerated. There was no fracture of the internal malleolus. The astragalus was uninjured, except that a small piece had been knocked off. The cartilaginous surface was unimpaired. The articulating surface of the tibia was also entire. The periosteum of the lower part of the shaft of the bone was in part detached, and was in other places readily peeled off. The fibula was fractured obliquely, about three inches above the malleolus. The periosteum was readily detached.

MIDDLESEX HOSPITAL.

ACUTE TRAUMATIC TETANUS FROM WOUND OF THE FOOT; RECOVERY UNDER THE USE OF TINCTURE OF ACONITE.

(Under the care of Mr. de Morgan.)

Of all the vegetable preparations, aconite is known to be one of the most powerful in its action upon the spinal nervous system; hence its value in tetanus ought not to be inferior to the many other anodyne remedies which are occasionally employed. In the In the pages of this journal, (1846,) we have recorded an instance, under the care of Mr. Paget, at the Cumberland Infirmary, Carlisle, in which a recovery took place under the use of Fleming's tincture of aconite. Another example also appears (ibid,) from Mr. Newton, of Newcastle, treated by the same remedy, which proved unavailing, for death ensued. We now give another, in which life was saved by the administration of aconite; but whilst we feel disposed to give due credit to the influence of the drug upon the disease, we can hardly attribute the entire cure to it, when the period at which its employment was commenced is remembered, for the tetanic symptoms had been existing twelve days before it was had recourse to.

We recollect a case of acute traumatic tetanus at Guy's Hospital in the summer of 1858, under the care of Mr. Cock and Dr. Wilks, treated by as many as 110 doses of cannabis indica; but the cure was attributed more to the quantity of wine and beef-tea taken than to the medicine. In Mr. Fergusson's second case, reported to-day, aconite was found ineffectual, and woorara was substituted for it, with, however, no better result.

The patient in the present case, a lad aged fifteen years, had always enjoyed good health. On the 30th of August, 1858, while wearing thin boots, he trod on a rusty nail, which pierced the ball of his foot. He withdrew it directly; the wound bled but little, and healed in a few days. On Sept. 6th the boy felt stiffness about the neck and lower jaw, which increased daily, and on the 12th he was unable to open his mouth, and could not walk owing to the stiffness of his back. He was admitted into the hospital on the 16th. There was then well-marked rigidity of the muscles of the neck and jaws, and the risus sardonicus was characteristic. He was unable to turn his head or separate his jaws; abdominal muscles very tense; complains of much pain in the neck and back; has not slept for two or three nights; bowels open; perspiring; pulse 80, moderately full. A hard cicatrix in the sole of the foot was excised. He was at first put upon strychnine, one-tenth of a grain, every two hours; carefully watched; soon diminished to one-twentieth of a grain but the symptoms continued to increase. Twitchings began in the thighs, and great difficulty of respiration, and finally severe general spasms, with well-marked opisthotonos.

On the 20th, the plan of treatment was changed, and tincture of aconite was given, at first five minims every two hours, then eight minims. This was continued till the 27th. The dose was then administered every four hours, and on the 28th every six hours, and on the 6th of October it was left off altogether. The diet was throughout the most nourishing that could be taken—strong beef-tea, brandy, &c., and the bowels were kept by open turpentine injections. From the time the aconite began to take effect an improvement took place in the severity of the symptoms, and he has been steadily and gradually progressing, though very slowly. First the general spasms and opisthotonos ceased, then the convulsive twitchings of the extremities; these lasted till about the 1st of October, at which date he could sit up for his meals, could separate his teeth about half an inch; ate and slept well; face almost regained its natural expression.

Has been slowly convalescing since then. Can now—October 22nd—walk about and appears in good health and spirits; only still feels a little stiffness about the muscles of the back, and cannot yet quite separate the jaws as wide as natural.

He was discharged from the hospital well.

LONDON HOSPITAL.

ACUTE IDIOPATHIC TETANUS, TERMINATING FATALLY IN SIXTY-EIGHT HOURS.

(Under the care of Mr. Curling)

The idiopathic form of tetanus is rarely seen in this country. We, however, append an instance of it, which Mr. Curling considered to be undoubted, and a more severely acute example he had never before witnessed in a female. The history of the case shows the occurrence of a fracture of the ulna some three months before. The interval was thought by Mr. Curling to be too long to permit of its being deemed the exciting cause, and no evidence whatever was manifest to show that the case was any other than an example of the idiopathic form. Death occurred in sixty-eight hours. It may be observed that severely-acute cases of idiopathic tetanus terminate more rapidly than this in hot climates; but generally speaking, the idiopathic form is much less fatal than the traumatic, because it is milder. Of forty-six cases of the latter mentioned in Mr. Curling's "Treatise on Tetanus," occurring in hot climates, as many as ten actually recovered. We have availed ourselves of the notes of Mr. D. W. Bush, one of the hospital dressers.

Mrs. P———, aged forty-one, was admitted on the 12th of January last. She stated that she had been accustomed to work hard at washing, and attributed her present illness to overwork and exposure to cold and damp. She said that she had not received any external injury during the last three months—at which date she was admitted into the hospital with fracture of the ulna. The husband stated that in her youth she had a fall from a swing and injured her spine, and that ever since that time, whenever she caught cold, she complained of great pain in the back. The present attack commenced at five o'clock on the evening of Jan. 11th, up to which time she was in good health, with the exception of a cold. The first symptom—which came on suddenly—was inability to swallow, the attempt causing spasm of the constrictors, and also of the muscles of the face, the mouth being drawn up on one side. She went to bed and obtained a little sleep, but was disturbed by the spasm, and in the morning came to the hospital. When admitted—at twelve o'clock—she complained of stiffness of the neck, with difficulty in deglutition, and pain in the region of the diaphragm. The abdominal muscles were not partiularly tense but those of the neck were. The jaw was closed, but able to be opened about a quarter of an inch. She could answer the questions put to her. There was more or less opisthotonos, and the knees were drawn up during the continuance of the spasm. Pulse 108, weak.

Mr. Curling saw her at two P.M., and prescribed milk and beef-tea, eight ounces of wine (if able to swallow, *ad libitum*), a pint of porter, and a draught containing twenty minims of chloric ether, and a like quantity of laudanum and sal volatile, to be taken every three hours; injections of beef-tea and wine were also to be resorted to if the patient became worse. She was placed under chloroform, during the influence of which the pulse fell to 80, and the respirations were 53 in the minute. The jaw could be opened an inch, and she was made to swallow a little wine. No good effect appeared to follow these proceedings. During the evening she was in great pain, and shrieked continually; but she continued to take to the medicine, &c., up to four A.M. when she had a severe spasm, after which she became insensible, and passed her urine unconsciously. At six the spasm again occurred, but with greater severity, lasting about two minutes, during which the nurse thought she would have died. At eight she had another, but less severe. After this time they returned at different intervals, coming on spontaneously, and also immediately the introduction of any fluid into the mouth was attempted. During the spasm the countenance underwent a great many changes; the eyelids at the commencement were closed, but open towards the termination; eyes slightly divergent; pupils dilated; great lividity of the face, and frothing at the mouth; the legs straight, and the feet everted; respirations 56 in the minute; pulse 120, and weak; jaws firmly closed. At eleven: Has been gradually getting worse. She has been for some hours unable to swallow, but the injections have been regularly continued every three hours." At twelve: "Gave chloroform, and while under its influence she swallowed several spoonfuls of wine. The influence was kept up about fifteen minutes, and as soon as it passed off, the introduction of fluid into the mouth brought on a spasm." At length, about forty-five minutes after twelve, a more severe spasm came on, and the pulse suddenly stopped (although she breathed five or six times after). Her death was apparently due to spasm of the heart, respiratory movement having been observed after the cessation of the pulse at the wrist.

At the post-mortem examination, which was carefully performed by Dr. Andrew Clark, nothing particular was found, with the exception of a small quantity of fluid which was present in the lateral ventricles, and marks of incipient pneumonia in one lung.

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UNIVERSITY COLLEGE HOSPITAL.

HYDATID TUMOUR OF THE LIVER; PUNCTURE OF THE CYST, FOLLOWED BY SUPPURATION.

(Under the care of Dr. GARROD.)

EVERY organ of the body has at one time or another been invaded by the acephalocystic variety of hydatids, with the exception, as has been asserted, of the alimentary canal and urinary bladder. Of all the internal organs, however, the liver is found to be the one in which they are most commonly observed; indeed, they would seem to have some remarkable predilection for this viscus, owing, it is believed, to some peculiarity of its structure favorable to their development. They have been noticed by most of the older writers on medicine, and on reference to Glisson's "Anatomia Hepatis," published at Amsterdam in 1659, we find the following description of them as they occurred in the liver:—

"Contingunt etiam aliquando in hepatis tunicâ tumores particulares; suntque pustulæ aqueæ, vesiculis illis non absimiles, quæ ab emplastris epispasticis excitari solent, sed elatiores paulò; utrobique nempe summa pelliculæ tenuitas, et aquæ copia."—p. 106.

We do not purpose entering into the history of the growth and development of hydatids, but shall simply refer to the question of treatment when they occur in the liver; for after all, however little can be done when they exist in some other situations, there is more to be expected from judicious interference when they are ascertained to be present in the hepatic structure. If left to themselves, they are liable not only to destroy life by arresting some of the natural functions of the body, but they may burst into the cavity of the peritoneum. Hippocrates was evidently well acquainted with this fact, for we find amongst his Aphorisms, that "when the liver is filled with water, and bursts into the epiploon, in this case the belly is filled with water, and the patient dies." (Syd. Soc. Edition, page 770.) There can be no doubt that hydatids are here understood, and that the epiploon is meant for the abdomen. The rupture of an hepatic hydatid seldom occurs unless from injury or accident, when it has attained a certain size, and then fatal peritonitis quickly ensues.

Assuming that an hydatid tumour of the liver has been satisfactorily made out, the question naturally arises in the mind of the physician, whether there is a single hydatid or a number of them present; for, unfortunately, it often happens that they exist in countless numbers, disseminated throughout the hepatic tissue. Dr. Watson, in his Lectures, mentions the case of a girl who died in the Middlesex Hospital, whose liver contained thousands of these globular bodies, the enlarged gland having, by its pressure, completely sealed up a portion of the inferior cava.

Experience proves, however, that it is seldom that more than three or four are developing in various parts of the organ at one time; but it is this circumstance which constitutes the difficulty, and we may say the danger, of interference; for if one is collapsed through evacuation of its contents, the others enlarge, and the patient dies at last from exhaustion.

Dr. Budd has afforded some useful hints on the treatment of hydatid tumours of the liver, which are of great practical importance. It is well known that hydatids sometimes spontaneously lose their vitality; the sac shrinks up, its inner surface secretes a peculiar matter compared to glaziers' putty from its appearance, and the tumour ceases to be of any further danger or inconvenience beyond that which arises from its mere presence. Now Dr. Budd proposes to imitate this state of things by art, if practicable, and he thinks it probable that it may be attained by medicine; but so far, the latter, except in a very few instances, has proved wholly unsatisfactory. He advises the tapping of the hydatid cyst through a *fine exploring trocar*, by means of an exhausting pump, drawing off all the water, and taking the precaution that not a particle of air shall enter the cyst—the danger of putrefaction of the dead hydatids being thus completely obviated. An instrument of the kind is prepared by Weiss, according to the plan recommended by Dr. Bowditch of Boston, U.S. Dr. Budd further advises the precaution of inserting the trocar downwards, with the outer extremity of the instrument at a higher level than the body, so that as the liquid rises in the canula it will expel the air from it. If the vitality of the hydatid is completely destroyed in this way, should others enlarge and become prominent, they may be submitted to the same plan of treatment if suppurative action does not spontaneously occur; should this take place, however, the nature of the case becomes changed to one of a more serious character. If there be but a single cyst in the liver, and no fresh growth make its appearance, a cure may be considered to have taken place.

The three examples of this affection which we now record were all tapped, but not with the precautions recommended by Dr. Budd; hence, in two, suppuration ensued; whilst in a third, at St. Thomas's Hospital, the sac had already undergone that process, and it was treated like a large abscess. In the following example the tumour was remarkably prominent just below the ensiform cartilage: it was tapped by a very fine trocar, and four ounces of aqueous and colorless fluid were withdrawn. This was followed by local peritonitis and rigors, which ushered in the suppurative crisis; and in three weeks from the first puncture an evacuation of pus was effected by a trocar. Afterwards matter with fœtid gas escaped from the old opening, and at the present time the former continues to flow to the extent of a few ounces daily. The general bulk of the liver has become diminished, and the disease is now chronic; but it is most probable that there is only a single hydatid in this instance, although at first it was suspected that there might be more.

Jane J——, aged nineteen, admitted March 23rd, 1860. Has enjoyed good health up to two years ago; the catamenia appeared at fifteen, and have always been regular until six months back, when they became irregular. Two years ago she had an attack of jaundice, which continued for four months, but did not confine her to bed. She states there was no tumour in the hepatic region at that time. After the attack of jaundice her health remained perfectly good again until last November, when she felt shooting pains in the back, under the right scapula, not extending down the arm, and at the same time discovered a swelling in front near the lower end of the sternum. This tumour gradually increased in size, and she soon felt an aching pain in it of a continuous nature. The patient thinks it was about two months after the discovery of the first that she noticed another small swelling beneath this. The swellings gradually enlarged, and became more painful, and at the same time her appetite began to fail. A month ago she was admitted into the hospital under Dr. Murphy's care, and the tumours have been painted over with compound tincture of iodine every day, without, however, diminishing them, or giving much relief. Since her second admission, another small swelling has made its appearance external to the other two. Bowels have always been regular.

March 27th.—Present state: Patient is thin and somewhat emaciated; muscles rather irritable, but in a better condition than on admission a month since. Hepatic dulness extends as high as the level of the right nipple, and below to horizontal line through umbilicus. From about three inches below the right nipple considerable bulging is observed, extending to the left, two or three inches beyond the median line. This bulging seems to be composed of two protuberances, the larger occupying the epigastrium and part of right hypochondriac region, the smaller below and somewhat to the left. No tenderness felt over prominent parts, but much below them. On pressure over the large central protuberance some sensation of elasticity is experienced, and sudden pressure on one side is propagated to the other. Conjunctivæ not turgid. On examining the back, some distinct but slight bulging is seen in hepatic region, and dulness on percussion extends about an inch higher on the right than on the left side. Slight curvature of the spine is noticed, the concavity towards the right side. She was put upon *sarsaparilla*, three grains of iodide of potassium, and decoction of cinchona, thrice a day.

18th.—A fine trocar was passed into the centre of the larger mass in the epigastrium by Mr. Erichsen, when the suspicion of the hydatid nature of the tumor was confirmed; for a clear fluid—four ounces—was drawn off, which was found to contain minute flakes, each consisting of a collection of well-formed echinococci. After the tapping a compress was applied, and, with the exception of slight vomiting, no bad symptoms appeared.

30th.—Some pain and tenderness in the region of the puncture.

31st.—Much relieved from pain: tumour not much diminished in size, but the note over it is quite tympanitic.

April 1st.—Had an attack last night of rather severe rigors, with the return of pain over the swelling. To-day the pulse is 130, very weak; cheeks flushed; suffering great pain over the region of the liver on the slightest movement, deep inspiration, &c. Slight tympanitis of the abdomen.

3rd.—Has less pain to day; no return of rigors; still much tenderness over the hepatic region.

10th.—Pain has varied since the 3rd, but she feels much better; the central tumour appears larger and more tense.

19th.—Yesterday about six or eight ounces of thick fœtid pus were obtained by tapping the centre of the tumour. The tumour became flaccid for a time, but to-day is again distended. The complexion and the eyes are less yellow than they were.

24th.—On the night of the 22nd the tumour gave way from the old opening, apparently discharging air at first, then watery fluid, and afterwards thin fœtid pus. Yesterday the discharge of matter continued; but to-day it has ceased. The patient remains comfortable as before.

May 1st.—Since the last report the tumour has been discharging a mixture of pus and blood. The skin nearly natural in color.

22nd.—For the last few days the tumour has been again plugged up and very painful; patient much exhausted; pulse 130. Ordered a mixture of quinine.

24th.—The abscess discharged two or three teacupfuls of pus, after which she became better.

June 5th.—The tumour much diminished in size, and discharges pretty freely.

July 5th.—She remains much the same; very weak; unable to get up. Two grains of sulphate of iron to be added to her quinine mixture.

Aug. 2nd.—She suffers less pain; discharge still continues, and amounts to about four ounces in the twenty-four hours; has not lost more flesh; the tongue is clean, and she is free from pain.

ST. THOMAS'S HOSPITAL.

SUPPURATING HYDATID TUMOUR OF THE LIVER, SIMULATING AN EMPYEMA: EVACUATION OF MATTER BY THE TROCAR; RECOVERY.

(Under the care of Dr. GOOLDEN.)

In the following case, the simulation of a bulging empyema of the right side was remarkably strong, but the true nature of the case soon became apparent, and to give relief paracentesis was performed, the result being a good recovery, although the patient was very low and feeble for some time. Here, also, it is fair to assume the presence of but a single hydatid. We are indebted for the brief account of the case to Mr. Jervis, surgical registrar to the hospital.

A. P——, aged twenty-two, single, needlewoman, admitted into Ann's ward April 24th. States that two years and a half ago she had a similar attack to the present, and was laid up with it for eight months. From that time to the middle of February she had enjoyed tolerable health. The inferior part of the right side of the chest always remained prominent. Since the latter date, cough had been very troublesome, with increasing dyspnœa and general weakness. Appetite bad; appearance of countenance anxious and pallid; nights disturbed by pain in the side—always aching, occasionally lancinating, in character; and cough and profuse perspiration. Has had no appearance of catamenia since illness commenced. This was at first supposed to be a case of pleuritic effusion, and so treated; but finding that neither local nor constitutional symptoms abated under the means used, that the bulging of the side was undiminished, and the general distress continued, Dr. Goolden, on the 14th of June, wished paracentesis to be performed. This was done by Mr. South, and a small quantity of a tenacious glutinous fluid escaped. She got no sleep that night, but expressed herself on the following morning as feeling relieved A discharge of similar matter continued to escape, and with it a portion of a partially decomposed hydatid.

July 17th.—A large quantity of pus and fragments of hydatidinous membrane continue to come away. She still feels very low; the appetite remains poor, and nights disturbed by cough; but the tongue is clean, and she is free from pain.

21st.—Feels much better and stronger; able to raise herself in bed; quite free from pain; her sleep is much better, and appetite improved; but little discharge now comes from the wound.

Under generous diet and tonic medicines she completely recovered, and was discharged, cured, on the 17th of July.

CHARING-CROSS HOSPITAL.

HYDATID TUMOUR OF THE LIVER; PUNCTURE OF THE CYST, FOLLOWED BY SUPPURATION AND DEATH; DISCOVERY OF OTHER PARASITES IN THE HEPATIC STRUCTURE.

(Under the care of Mr. CANTON and Dr. WILLSHIRE.)

The most curious fact in the history of the annexed case is the very short period during which the swelling formed presenting itself in the epigastrium immediately behind and below the lower end of the sternum, as in Dr. Garrod's patient. It was tapped, with great relief, on several occasions; but notwithstanding this the general hepatic dulness continued to increase, and death ensued, not so much from suppuration of the tapped cyst as from the general prostration consequent upon the arrest of function of surrounding organs by the enlarged liver. This contained four large cysts, each filled with a pint of clear fluid, and one of these was in the centre of the cyst occupying the epigastrium. They had all taken on simultaneous enlargement. We may observe, that in this patient, as well as in Dr. Garrod's, the puncture was performed with great care, but it is impossible to say that some air may not have found its way into the interior.

By adopting the suction plan recommended by Dr. Budd, the tumour can be emptied of its fluid, or nearly so; and in the event of the abdominal parietes not being adherent, as mentioned by him, the aperture made by the exploring trocar, from its minute size, together with the contraction of the hydatid cyst, will be effectually closed when the canula is withdrawn, and none of the hydatid liquor will escape into the peritoneum. In a recent case related by Dr. Budd, an imperial gallon (short by four ounces) was withdrawn in this way from an hydatid in the liver of a young medical man, which was followed by a perfect cure.

For the notes of the annexed case we are indebted to Mr. William Travers, late house-physician to the hospital.

William C——, aged twenty-six, native of Essex, has lived in London during the last seven years; has always been engaged in the public line; enjoyed good health up to past few weeks; somewhat troubled with cough during the winter; has never drunk to excess, taking chiefly beer, and of that about two pints per diem. About a fortnight prior to admission, he first complained of pain in right side when coughing; never noticed it when quiet; did not confine him to bed. Four mornings since, he says, he first noticed a swelling on the left side immediately below the ribs; this gradually extended to the right; has not altered in size up to this time.

Admitted April 18th, 1860. The patient is somewhat emaciated and of sallow complexion. The tumour feels firm, though with a sense of deep fluctuation, painless (except over the place, where leeches had been applied by his former surgeon); it occupies the epigastric, extending into each hypochondriac region, reaching higher up on the right side, apparently superficial to the ribs and ensiform cartilage, which is also, however, tilted up by a portion of it. There is a little fulness over the region of the liver, but no tenderness. Urine high colored, and depositing lithates copiously; bowels regular, clay-colored; tongue natural; appetite good; sleeps well; in no pain. Purgatives were administered, and, as some sickness had supervened, effervescing medicine with hydrocyanic acid. The tumour was blistered, and the sore dressed with mercurial ointment. Occasional diarrhœa was stopped by astringents; and opium given to allay pain, latterly felt. The tumour gradually increased in size, and was tapped on five occasions, a clear fluid in one instance, and a thick yellow fluid, of more or less quantity, in others, being the result. A swelling also now commenced and increased in the right side below the lower margin of the liver. The patient gradually became worse, and died on May 29th.

Post-mortem Appearances.—Heart and lungs healthy. Kidneys large, and highly congested. The liver of immense size, forcing all the other viscera out of position; its structure showed commencing cirrhosis; it contained four large hydatid cysts, each holding about a pint of perfectly clear fluid, contained in a transparent sac of apparently homogeneous membrane; one of these sacs was in the centre of an immense abscess, this being the swelling noticed on the right side.

CHARING-CROSS HOSPITAL.

CHRONIC ALCOHOLISM, AND ITS EFFECTS ON THE NERVOUS SYSTEM; RECOVERY.

(Under the care of Dr. Willshire.)

As illustrating the effects of alcoholic stimulants taken in various degrees of excess, and during various periods of time, we give six examples which lately presented themselves for treatment. The first two of these come rather under the class of chronic alcoholic intoxication,—a subject which has been brought into notice by the recent work of Dr. Marcet, reviewed in our pages during the past year. In both patients the prohibition of all fermented liquors was carried out from the commencement; in neither did symptoms of delirium supervene, and they left the hospital well. In the first of the two, the long-continued use of alcohol was well shown in its influence upon the nervous system, together with general derangement of the digestive organs. In the above-mentioned work, Dr. Marcet has been at some pains to show how often chronic alcoholism is attended by other diseases, more especially affections of the digestive organs; these secondary affections being frequently, in his opinion, the immediate cause of the attack of the specific toxæmia.

We may here refer to the "Rational Treatment of Delirium Tremens" as propounded by Professor Laycock in the *Edindurgh Medical Journal* for October, 1858, because it has attracted considerable attention throughout the profession. It consists in the entire omission of opium and alcoholic stimuli, which he has shown are not only useless but dangerous drugs in the treatment of this disease. He states further, to quote his own words, "that the delirium and sleeplessness indicate comparatively harmless conditions of the nervous system; that they are usually symptoms of some disease occurring in persons of drunken habits; that they usually cease within a given time, spontaneously; and that the proper method of cure is to treat the general or particular morbid state, whatever that may be, with which, the delirium is associated."

Since the appearance of Professor Laycock's paper, Professor Dunglison has stated in the same journal (April, 1860, p. 923) that he had pursued this practice as far back as 1840 with excellent success, having treated the mass of the cases which has fallen under his care without excitants proper or opiates.

"In the first instance, an emetic is given at times, if the patient is seen whilst laboring under the effects of a debauch, or any particular reason exists for its administration; and afterwards, a state of tranquillity in the chamber is enjoined—the intrusion of too much light and noise being prevented; and when the stomach will retain it, gently nutritious and easily digestible diet is prescribed, the bowels being kept open by gentle cathartics; and this has comprised the essential part of our treatment. In time, the hallucinations have disappeared, sleep has returned, and entire restoration supervened." He likewise observed that the treatment in the Woman's Lunatic Asylum of the Philadelphia Hospital has continued to be eclectic, often expectant, and not a drop of alcohol is given. When we state that deaths, are very rare under the "Rational Treatment," it will be seen to be worthy of deep attention; but if there be one thing more than another calculated to recommend it, it is the circumstance that those who are dismissed, cured, rarely or never return to the wards; and it is probable that, at least in a great many cases, the cures are real and permanent.

The value of opium is, however, so highly estimated in the treatment of delirium tremens, that it will require the record of a large number of cases to prove that this drug is wholly unserviceable in the complaint.

The notes of the following case were taken by Mr. C. Bennett, clinical clerk.

Edward S——, aged thirty-six, well educated, now an attorney's clerk, but formerly in India and China as a soldier for ten years. He there had dysentery twice, and, what he supposes, cholera. When abroad he drank very hard; indeed, the fleas and insects annoyed the soldiers so much that they were obliged to get drunk to enable them to go to sleep. At his period of greatest drinking he took, perhaps, one quart of spirits in the day, besides any other thing he might happen to get hold of; has seen some of his comrades drink a pint of spirits before going to bed; sometimes they were found dead in the morning; has seen some of his officers drink a pint of spirits in the afternoon. He had himself sleepless attacks, with delusions, when in India; but he maintains he never had delirium tremens. In 1849 he came to London; still drank pretty hard; was taken ill at Croydon, when his medical attendant stopped his drink. His friends had a physician from a well known London hospital to see him, who said the medical man was killing him, and ordered him brandy-and-water.' Two years ago he had typhus fever. He was then drinking hard, chiefly gin, and rum in his tea of a morning; at eleven he took some more. He next took stout at his dinner. In the afternoon he again took some gin or rum; and in the evening he had some porter, with, what he calls, a stiff tumbler of grog. He was then, he states, well for three months. He then began to feel very ill and wretched; his hand was unsteady; was obliged to resign his duties. Having no provision for his family, he got some law reporting to do for the cheap journals. At last, however, he could not write; he could not eat; he had bile in the morning, and constant belching; the bowels were rather irritable; he got yet more shaky; required more stimulants; his face became bloated; began to waste about the legs; had involuntary seminal emissions without erections. At length a large patch of eczema impetiginodes broke out upon the right hand and forearm. He now came to the hospital (Oct. 18th, 1859) upon the advice of a medical man and a lawyer's clerk whom he knew. He trembled a good deal, had a coated tongue, congested eyes, and was (as he has since informed Dr. Willshire) scarcely able to get into the room from debility and nervousness; and that when he was told to sit down he was glad, as he could not have stood a minute longer. He had been drinking latterly just as much as his means would allow him to procure; he was firmly impressed with the idea that he must have spirits, and when told that he must not have a drop, he fancied he must die. Dr. Golding retained him for two or three days after he came into the hospital, and then transferred him to the care of Dr. Willshire. All fermented fluids were strictly forbidden, full diet given him, and a mixture of carbonate of ammonia for a few days. Poultices, lime-water, powdered calamine, and zinc ointment were used to the hand. All the skin came off like a glove from the hand and fingers, and, by the 10th of November, the hand was almost well; he had gained flesh, all trembling had left him, had plenty of confidence in himself, and felt altogether a different being. Latterly he has been taking quinine and sulphate of zinc, with tincture of valerian, purgatives, and as much as he likes to eat.

Nov. 17th.—Improves; complains of not sleeping, however, since he has left off the morphia pills; hand and arm comparatively quite well.

CHRONIC ALCOHOLISM, WITH IMPENDING DELIRIUM TREMENS, TREATED BY SUSPENSION OF THE STIMULUS.

(Under the care of Mr. Canton.)

For the notes of this case we are indebted to Mr. J. Reeve Shorto, late house-surgeon to the hospital.

James W——, aged thirty-six, married, a general dealer, was admitted into the Charing-cross Hospital on Nov. 14th, 1859. With the exception of what is mentioned below, he has always enjoyed tolerable health. His habits, however, have been most intemperate, he being accustomed to take eight or ten glasses of gin daily, besides two or three pints of porter, and three-quarters of an ounce of tobacco for smoking. He states that he lives well, and takes meat daily, excepting when he more than usually exceeds in drinking, when for a week or so he is unable to take any solid food, but confines himself to slops, broth, &c. At these periods also he is exceedingly nervous. About two years ago he was admitted into King's College Hospital with idiopathic delirium tremens. He was there treated with brandy, beer, and opium. He remained in the hospital twelve days. Nine months afterwards he had another attack, and six months ago a third, for both of which he remained at home, and treated himself by freely taking spirits and beer.

Nov. 14th.—For the past week he has been, as he denominates it, "out on the drink." During the whole of to-day he has been indulging, and he has taken seven glasses of hot rum, besides gin and beer, and incessantly smoking. He has taken no solid food to-day. Towards evening he got into a row, and received a wound over the temple, which bled rather profusely. He applied at the Charing-cross Hospital for this, and, his wound being dressed, he was admitted, an in-patient under Mr. Canton, who prescribed an opiate. In appearance he is the very picture of a man who is addicted to intemperance. His face is bloated; his eyes are expressionless, and have a peculiar unsettled stare; his hand trembles very much, as also his tongue (which is coated white), and his whole aspect betokens the enfeebled constitution of a confirmed drunkard.

15th.—Very feeble. He has obtained no sleep. He spontaneously assures the house-surgeon that he apprehends another attack of delirium tremens if he is not allowed some spirits; and when told that it was intended that none should be given him, he was much astonished, and feared he would not recover. Ordered ammonia and bark, with chloric ether and opium, every four hours, and, as his stomach was irritable, some beef-tea; to have an opiate at bedtime.

16th.—Better. He has had some sleep. He is not so nervous, and is more tranquil in his mind. To have full meat diet daily, but no beer or spirits. Ordered a grain and a half of quinine, twenty minims of chloric ether, and fifteen of tincture of opium in water every four hours.

17th.—Feels much better. He says he experiences the same sort of relief from taking his quinine mixture as he usually does from imbibing his dram of spirits.

21st.—Still improving. The wound in the temple is almost well. The nervousness he complained of has almost departed.

A few days afterwards he left the hospital cured.

UNIVERSITY COLLEGE HOSPITAL.

HISTORY OF A CHILD FIVE YEARS OLD, BROUGHT IN, WITH SYMPTOMS OF POISONING BY RUM; RECOVERY.

(Under the care of Dr. Parkes.)

Dr. Taylor, in his work "On Poisons," gives an instance of three ounces of brandy proving fatal to a boy of seven years in thirty hours; and another of a child of the same age who swallowed eight ounces of undiluted rum, during the absence of her parents from the room. In the latter a recovery ensued, although the quantity of alcoholic liquid taken was so much larger; but this desirable result was brought about by the early use of the stomach-pump, with other energetic treatment. The quantity of rum taken by the child, in the following case, (which we give as recorded in the hospital books), was about three ounces; and a recovery ensued after the evacuation of the contents of the stomach. In some respects, (as also occurred in the case of poisoning from the eight ounces of rum), the symptoms resembled poisoning by opium:—

A healthy-looking child, aged five years, was brought into the hospital on Sept. 3rd, 1859. He is well made; has no rickets; the chest well formed. He is totally insensible; the limbs flaccid to the highest degree; he cannot be aroused by calling or speaking; the eyes are partially open; the pupils contracted, but not closely; the eyeballs roll a little; no strabismus nor lividity; temperature good, but not high; no sweating; pulse 108; respiration 30, regular; a little snorting; aspect that of a child in profound sleep, excepting that the eyelids are not closed, the eyeballs not turned upwards, and the pupils not closely contracted; no flush; no pallor. His mother says his color is as usual. No injection of conjunctivæ; no heat of head. The arteries of the neck are throbbing, and perceptible to the eye; pulse felt at the wrist. The brachial arteries are rather full; arteries throbbing; jaws clenched, with occasional snore; no grinding of the teeth; the breath has odor of spirits; no urine in the bladder.

History.—He has been suffering from whooping-cough and pneumonia (left lung), and confined to the house six weeks since. On the morning of Sept. 3d, between seven and eight, he was running about as usual. He afterwards drank about half a quartern of rum; his father beat him; he ate some bread and butter, cried incessantly for an hour and a half, then lay upon a couch, and remained in his present torpid state. He was much flushed generally all over, and the face covered with perspiration. When this state of countenance came on his bowels acted. At twelve o'clock salt-and-water was administered, which he did not vomit. An hour afterwards an emetic was given, which was also inoperative. A tube was then introduced into the upper part of the œsophagus, causing vomiting and ejection of matter, which smelt of spirits. He had not anything to eat before taking the rum.

The patient completely recovered, and was discharged from the hospital.

ST. MARY'S HOSPITAL.

THREE CASES OF DELIRIUM TREMENS, TREATED WITHOUT STIMULANTS; FATAL RESULT IN TWO.

(Under the care of Dr. Alderson and Dr. Sibson)

In the annexed cases no alcoholic stimulants were given after the patients were admitted into the hospital, as will be seen by the details, but some one of the preparations of opium, combined with ammonia, instead. In two a fatal result ensued, probably mainly brought about by the mechanical restraint employed. The prohibition of this terrible source of exhaustion cannot be too stringently enforced; for, as was recently observed in some clinical remarks on this disease made by Dr. Brinton at the Royal Free Hospital, "no matter to what degree reason may be degraded or dethroned, the delirious patient always seems sensible of the debasement and brutality implied by straps and bands." (The Lancet, vol. ii, 1860, p. 141.) If attendants cannot be procured to gently restrain and watch the patient, it were better under such circumstances to administer chloroform, which we have known to do more good than all the strait waistcoats; and we have in our "Mirror" recorded cases which, sleep having been induced by its employment in the London Hospital, terminated in recovery. (Ibid, vol. i. 1859, p. 53.) The notes of the subjoined cases were kindly furnished by Dr. W. H. Broadbent, medical registrar to the hospital.

Robert S——, aged forty-five, butler, was admitted into the above hospital, under the care of Dr. Alderson, May 16th. He had been engaged in his occupation as butler up to the date of his admission, enjoying good health, but drinking largely. When brought to the hospital, his countenance had a wild expression. there was general tremor, and he was apprehensive of some intention to injure him on the part of his fellow-servants; the skin was perspiring; pulse quick; tongue white and creamy. He was ordered two grains of opium at once, and a grain every hour till sleep should be induced.

May 17th.—In much the same condition; can answer a question rationally. but is unable to fix the attention on any subject. The following mixture was substituted for the crude opium: sesquicarbonate of ammonia, four grains; solution of morphia, twenty minims; tincture of lavender, fifteen minims; and acetate of ammonia mixture, one ounce, every four hours. Eleven P.M.; Very noisy; sweating profusely; in other respects about the same. As it was found that he and another patient suffering from phrenitis were mutually exciting each other, and disturbing the ward by responding in loud shouts, he was removed to a separate ward. During the night he became violent, and the attendant, without consulting the house-surgeon, put on the straight waistcoat. At four A.M. the house-surgeon was called. His struggles had suddenly ceased, and he was found unconscious; pupils fixed and dilated; surface cold and clammy; slight convulsive movements of the extremities, and twitching of the mouth; pulse imperceptible; respiration suspirious. He died in ten minutes.

At the post-mortem examination nothing was found beyond slight subarachnoid effusion.

Thomas C——, aged thirty-six, admitted, under the care of Dr. Alderson, June 4th, 1860. He is a pipe-maker, and, in carrying round his pipes to public-houses, has been in the habit of drinking much gin and beer. He has had several attacks of delirium tremens. When admitted, had not slept for two or three nights, but had imagined that people were jumping about outside his window, and deriding him. Hand and tongue unsteady; skin cool; pulse 88; tongue white and moist; no actual delirium. Ordered two ounces of compound senna mixture, to be followed by twenty minims of solution of muriate of morphia, with three grains of sesquicarbonate of ammonia in camphor mixture, every four hours. He had a pretty good night, continued to improve, and on the 12th was discharged cured.

Thomas M——, aged thirty-four, admitted, under the care of Dr. Sibson, March 16th, 1860. For the last six months has been suffering from cough, with pain in the side and expectoration, and he has been in the habit of taking half a pint at least of brandy daily. When admitted, he was agitated. tremulous, apprehensive, but not delirious. Skin moist; pulse 90; tongue white and moist. He was ordered ten grains of colocynth pill with calomel, and a mixture of the acetate of ammonia, with excess of ammonia; at night he had forty minims of Battley's solution, and twenty minims every three hours till sleep was produced. Diet, broth, with a pint of porter.

March 17th.—He had a little sleep in the night, and seemed about the same. The opium to be repeated at night.

18th.—Did not sleep, and now insists on going home, imagining that some mischief to him was intended. He was easily persuaded to return to bed; but he required constant watching during the day, and towards evening became violent. Battley's solution to be given every two hours.

19th.—Very much excited, and with difficulty kept in bed; imagines that he is to be punished for some crime. Hand tremulous; skin perspiring freely; pulse 98; respiration 24. As he became more and more violent, and as he was an exceedingly powerful man, and could not be restrained, he was removed to a separate ward, and the straight-waistcoat was put on. His efforts to free himself were fearful, and though the opium was increased in quantity and given at shorter intervals, he had no sleep.

At about six A.M. on the 20th he ceased to struggle, and seemed to sleep; but it was soon seen that this was not sleep, and before the house-surgeon could be called he was dead.

On post-mortem examination, both lungs were found universally adherent and greatly congested. There was slight subarachnoid effusion, and both lateral ventricles of the brain were greatly distended by fluid.

ST. GEORGE'S HOSPITAL.

VACCINATION, FOLLOWED BY INFLAMMATION AND ABSCESS OF THE ARM, ON THE RECEIPT OF A BLOW UPON THE SCAB; FATAL PYÆMIA.

(Under the care of Mr. Cæsar Hawkins.)

The phenomena detailed in the following case are of such an unusual character that we feel disposed to set them down as the result of some inherent vice in the constitution of the patient. A rather severe blow received upon the dried-up vesicle of vaccination was followed by extensive inflammation and abscess, of so serious a nature as to end in pyæmia and death. It is, of course, a common occurrence for an accidental blow or injury to be received on the vaccine vesicle of a child, and to be followed, perhaps, by a certain amount of inflammation; but seldom indeed has the mischief proceeded so far as in the present instance. We have also known sloughing to ensue around the vesicle, without preceding injury to the part. Dr. Gregory mentions, in his 'Practice of Medicine," that in some instances the specific inflammation or areola is very violent, extends from the shoulder to the elbow, invades the trunk of the body, and requires to be assuaged by cold lotions; but this, we may observe, is one of the irregularities in the phenomena of vaccination. We place the present case on record, however, from its extreme rarity in respect of the severity of the symptoms supervening. A point of interest in the post-mortem examination was the detection of air in the pericardium.

Charlotte W——, aged thirty-five, admitted March 31st. One month previously she was vaccinated; the vaccine took well, but when the pustule had scabbed over she gave her arm a violent blow; this was followed by inflammation of the arm. On admission, the upper part of the left arm was very red, swollen, and painful, and there was threatened suppuration at the upper and back part. She looked pale and thin, and was given meat and porter. The swelling at the back of the arm increased, and on the 9th of April Mr. Hawkins opened an abscess in that situation. It appeared to extend across the back part of the shoulder joint and under the pectoral muscles. A large amount of thick pus escaped.

April 14th.—She had a rigor which lasted half an hour. Complained of much pain in her arm; the abscess was discharging freely. Tongue loaded; pulse 84, weak. She was given an ounce of brandy and a saline mixture with ipecacuan (five grains) every six hours.

15th.—The countenance was anxious; she was constantly sweating during the night; and complained of pain, which came on suddenly, over the right patella.

On the 16th the bursa patella was found to be inflamed, very tender, and fluctuating. She was very sick during the day. The abscess was discharging considerably; the pus was unhealthy, and had extended beneath the scapular portion of the deltoid. The bursa was opened, and pus mixed with bursal fluid escaped.

17th.—Another rigor took place, leaving her in a very exhausted condition; there was a slight erysipelatous blush over the arm.

The erysipelas continued to spread, and on the 21st the whole body and extremities were implicated. The discharge from the abscess was very offensive, and mixed with blood; pulse 140. There were several gangrenous patches situated over the prominent parts of the ribs and right side, and also over the right nates. From this time she gradually sank. She was given a pint of wine daily, with as much beef-tea as she could take; but she showed no disposition to rally, and died on the 23rd, at seven A.M.

Examination thirty hours after death.—The body was in good condition. There was a large abscess in the left axilla, which had been opened during life; it contained rather foul pus. The marks of vaccination on the left arm were very faintly perceptible. There was an abscess over the right patella, which had also been opened; the joint was normal. The pericardium contained a large quantity of air; in other respects it was natural. Heart, lungs, and other viscera healthy. The uterus was retroverted, and lay supported by the rectum, pointing towards the left sacro-ischiatic foramen. Its posterior wall contained two very small fibrous tumours. The ovaries contained each a false corpus luteum. They, as well as the uterus were natural. No morbid appearances were found in the great veins of the trunk and thorax; those of the limbs were not dissected, in consequence of the objections of friends.

UNIVERSITY COLLEGE HOSPITAL.

ACUTE INFLAMMATORY ŒDEMA OF THE SCROTUM, FOLLOWED BY EXTENSIVE SLOUGHING OF THE INTEGUMENTS, PYÆMIA, AND DEATH.

(Under the care of Mr. Erichsen.)

Many years ago, Mr. Liston described (in the twenty-second volume of the "Medico-Chirurgical Transactions") an affection of the scrotum, which he characterized by the name of "Acute Anasarca of the Scrotum." This part of the body becomes suddenly distended by the effusion of serous fluid, the disease resembling, in many of its characters, extravasation of urine; but its treatment is somewhat different from that of the latter affection.

"This acute œdema often follows on sores or eruptions situated in the groin, genitals, or inside of the thighs, and on fistulæ about the perinæum and anus. These may, perhaps, in consequence of some constitutional disturbance, have the secretion from them suppressed, and they may become surrounded by a slight erythematous blush. Suddenly the scrotum begins to swell, and sometimes in less than twelve hours it will be found immensely distended; and this arises generally from the infiltration apparently of a very acrid and fœtid sanies. If this be allowed to distend the scrotum, without being interfered with, it will have the same bad effects as the effusion of urine. On inquiry it will generally be found that there has existed no previous disease of the urethra, or impediment to the passage of the urine, and a large-sized catheter may be put into the bladder without meeting with any obstruction."—*Liston's Practical Surgery*, p. 450.

As the disease advances, unless early and energetic treatment be adopted, the scrotum becomes hot and shining, the integument sloughs, and the whole cellular tissue of the part is destroyed. The treatment consists, at the commencement, in a free incision in the mesial line, or on each side of the raphé; fomentations and support to the parts. If sloughing occurs, the ordinary principles of treatment must be adopted.

Such an instance of disease has just terminated fatally in the above hospital. (We are indebted to Mr. H. C. Bastian, house-surgeon, for the notes of the case.) The attack came on without any assignable cause, and succeeded rapidly on a slight pain during micturition. The scrotum swelled to the size of an adult's head; and although free incisions were made, the whole of the scrotal integument sloughed, and was removed in one single mass with a pair of dressing forceps, leaving the testicles quite bare. Granulations sprang up on the testicles, and appearances seemed favorable, when the left groin and thigh began to swell, pyæmia became developed, and the patient died. It is a good sample of a rare disease, first described by Mr. Liston and is occasionally witnessed in hospital practice. The symptoms, at first sight (as Mr. Erichsen clinically observed), were not unlike urinary extravasation; but the history is clear of absence of stricture or other impediment to the flow of urine; and he considered it an attack of acute idiopathic phlegmonous erysipelas of the scrotum. When the slough was detached, the man's condition was so good as to lead to a hopeful prognosis, particularly as there was no indication of the mischief higher up, nor any tendency to involve the peritoneum.

Under the heading of Diffuse Inflammation of the Scrotum, Mr. Curling* speaks of this affection as occurring under two forms. In one, he observes, it is mild and unattended with danger, and terminates favorably under gentle antiphlogistic treatment. In the other form (of which the following is an example), the complaint is severe and dangerous, and prompt and decisive measures are requisite to avert serious consequences.

John T——, aged twenty-eight, ironmonger, single, admitted Aug. 17th, 1860. Habits regular and temperate; diet good; has generally enjoyed excellent health, but about six years ago contracted a gonorrhœa. He has never had stricture, nor the slightest difficulty in micturition, and instruments have never been passed into his urethra. A few days after the commencement of the gonorrhœa he noticed a small and hard swelling in the perinæum, apparently connected with the urethra, and also scalding in this situation when he passed urine; at the same time the penis became œdematous and swollen to more than twice its natural size, so that the medical man who attended him was obliged to make incisions into it, which gave exit to an oily-looking and very offensive discharge. As the penis increased in size, the swelling in the perinæum gradually subsided of its own accord.

Since this first attack, six years ago, the penis has swelled up six or seven times at pretty regular intervals, being preceded each time by the lump in the perinæum and pain in micturition, lasting about a week or ten days, and then bursting on the anterior and under surface of the penis, and giving exit to the same fœtid discharge as before. Each of these attacks has supervened without any assignable cause. The patient feels quite confident they were not due to fresh "claps," and sometimes they have come on when he has had no connexion for six weeks or two months previously.

The present attack commenced on the 14th of August, without any apparent cause, by a slight pain during micturition in the perineal region, and then a swelling, which soon extended to the scrotum; but the penis did not become affected till the 16th. On the day before this the medical man in attendance had made several punctures in the scrotum, and let out some serous fluid; but when seen by Mr. Erichsen on the evening of the next day the scrotum and penis were enormously distended, the former being about the size of a man's head, and sloughs had already formed in the lower and posterior parts. Free incisions, about six inches in length and one and a half in depth, were at once made on each side of the raphé, and exit given to a quantity of brownish fluid; poultices were then ordered to be applied to the part, and the patient was well supported with brandy.

The next day he was admitted into the hospital, the penis and scrotum being still greatly distended, though somewhat diminished in size. The inflammation had extended anteriorly to the upper part of the thighs, involving the lower part of the abdomen, and were covered with an erysipelatous blush. Pulse 155, full; tongue white, furred. Two more incisions were made into the scrotum, and the patient ordered to have chlorinated poultices applied to it, and hot fomentations to the thighs and abdomen; two ounces of egg-and-brandy mixture every three hours, and ten grains of carbonate of ammonia, with a drachm and a half of tincture of cinchona in camphor mixture, every six hours; meat diet, two pints of beef-tea, and one pint of milk.

Aug. 18th.—Erysipelas diminished; pulse 120, not so strong; tongue less furred; penis a little more swollen; anterior and lower part of scrotum one mass of slough, but a line of demarcation has formed on the upper part, higher on the left than on the right side; micturition free and painless. To continue medicine as before, and scrotum to lie raised.

19th.—Erysipelas has disappeared; pulse 130, pretty full; tongue nearly clean; feels more comfortable; scrotum much the same as yesterday.

21st.—Sloughs now separating, with copious discharge of pus; bowels rather relaxed; tongue moist, nearly clean; pulse 145, rather feeble. The brandy to be increased to three ounces every three hours. To have thirty minims of tincture of opium at night.

22nd.—Nearly the whole of the scrotum separated to-day in a state of slough, leaving the testicles covered only by the tunicæ vaginales; the right completely denuded, but the left still covered by a little slough, though the cord on this side is much more completely exposed than on the other, and the corresponding testicle being more than an inch below the right, which the patient states has always been the case. There is no hernia. Pulse 152, rather weak; tongue clean and moist; sleeps tolerably well at night.

24th.—Feels much better; had a very good night; the left testicle is now also quite denuded; œdema of penis has nearly disappeared, though no incisions have been made into it; tongue clean and moist; pulse 118, pretty full; appetite good. Brandy mixture to be diminished to an ounce and a half every three hours. Testicles and remains of scrotum to be enveloped with lint dipped in a weak solution of sulphate of zinc, two grains to the ounce of water.

27th.—Tunicæ vaginales, remains of scrotum, and left cord are now covered with florid granulations; still the same dressing applied; pulse 120; tongue clean; appetite good; the penis has regained its natural size; the bowels have been rather relaxed. Ordered chalk mixture three times a day.

On the 31st, the left groin was swollen, and this gradually extended to the left thigh; symptoms of pyæmia commenced to show themselves, followed by jaundice. A few days after, he became exceedingly low, and notwithstanding the free use of stimulants and other measures, death occurred on the 6th of September, at seven A.M.

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* On Diseases of the Testis, 2nd edit., p. 470.

CHARING-CROSS HOSPITAL.

DISLOCATION OF THE STERNAL END OF THE CLAVICLE FORWARDS, FROM INJURY.

(Under the care of Mr. CANTON.)

THE clavicle being so strongly articulated between the scapula and the sternum, explains the cause of the comparative rarity of its dislocation. This wise provision of nature is of great importance when it is recollected that this bone is the only medium of connexion between the arm and the trunk. The strength of the ligaments is such that the bone more generally gives way and breaks, than that these should become lacerated. Those which bind the bone to the sternum are the anterior and posterior sterno-clavicular ligaments, which are continuous at the upper and lower parts of the articulation, and thus form a complete capsule around the joint. Besides these there are the inter-clavicular and the costo-clavicular or rhomboid ligaments, which further serve to strengthen the joint at this place—the latter especially. The sternal extremity of the clavicle may be dislocated forwards in front of the sternum by blows on the shoulder, by bending the shoulder forcibly backwards, and by a fall upon the elbow when separated from the side. Displacement backwards may be effected by violence, but is usually the result of curvature of the spine, which draws the end of the bone behind the sternum; and it may be luxated directly upwards. The displacement of the sternal end of the clavicle is so rare, that Sir Astley Cooper had not met with an instance in the course of his extensive experience. The luxation forwards is the more frequent. We have the opportunity of placing upon record to-day an example of this dislocation. In relation to this form of displacement, Nélaton observes: "This luxation, denied by Duverney, contested by Portal, and considered as the most common by Samuel Cooper, is the only one, as has been stated, that Boyer and Sanson regarded as proved." (Path. Chir., t. ii., p. 335.) Although the above is considered to be the most common form, yet the same surgeon has shown that there are at least a dozen cases on record of the very much rarer form of dislocation backwards. In Mr. Bryant's recent work on "Diseases and Injuries of the Joints," an example is given of sternal dislocation of the clavicle forwards in a boy, aged thirteen, who was run over; and one of dislocation of the same end of the bone backwards, in a man, aged fifty-two, from a load of bricks falling on him. Both cases did well.

Mr. Canton's patient was knocked down by a cab, and thrown most probably upon his shoulder, which produced a luxation of the sternal end of the bone forwards. Besides the usual symptoms described in surgical works, the sterno-mastoid muscle of the injured side was very tense, especially the sternal portion. There was no rupture of its fibres—a condition which notably occurs, on the authority of Nélaton, in those cases in which the sternal end is inserted beneath the articulation itself. Reduction was readily accomplished, with the probability of its being permanent. Should it, however, not prove to be so, a simple deformity will remain, but one that cannot interfere with the establishment of perfect movements.

James F——, aged forty-six, laborer, was knocked down by a cab on the 15th of August, 1860. He received several contusions, and amongst others complained of his right shoulder, on which he thinks he fell. On examination, the following appearances presented themselves:—

The sternal end of the right clavicle unusually protuberant, and about half an inch lower than on the opposite side. Trapezius of the same side somewhat relaxed. Sterno-mastoid very tense, with a deep fossa posterior to it; the sternal portion of it very tense, but not ruptured. Shoulder rather lower than the other. The distance from centre of sternum to acromion about half an inch less than on the left side. Length of clavicle the same on both sides. No particular pain when at rest; brought on, however, by moving, such as attempting to rise, and coughing, accompanied by a feeling of mobility at the sterno-clavicular articulation. This is also distinctly perceived by placing the hand over the part, no crepitous, however, being felt. He keeps the head over towards the affected side, moving it to the opposite side causing pain. Movements of arm not much affected—in fact, he can throw it across the chest further than the left one.

Reduction was accomplished by drawing the shoulder back, raising the arm considerably, and directing the clavicle to its normal position by manipulation anteriorly. A pad in the axilla was adapted by the spica bandage, and a compress applied over the inner end of the bone.

ST. MARY'S HOSPITAL.

CALCULUS IN THE BLADDER, TREATED BY LITHOLYSIS OR SOLUTION OF THE STONE BY INJECTIONS OF THE CARBONATE OF LITHIA, CONJOINED WITH LITHOTRITY.

(Under the care of Mr. URE.)

THE treatment of stone in the bladder by means of the injection of certain substances possessing a solvent power, or of remedies taken by the mouth, has met with so little attention at the present day as to pass unnoticed in many of the recent works on surgery. The subject, however, is one of considerable interest and importance, and well worthy of revival in connexion with the operation for crushing stone. Of the two methods adopted for dissolving stone, that which has afforded the most positive results is through the direct contact of the solvent agent with the calculus in the bladder. Many years ago, Sir Benjamin Brodie demonstrated that phosphatic calculi were sometimes completely dissolved by means of dilute nitric acid injections, or became so disintegrated that the fragments would readily pass along the urethra. In 1843, Mr. Ure made an effort to introduce the carbonate of lithia into notice as a solvent of uric acid calculus; and in 1851, Dr. Elliott Hoskins, of Guernsey, advocated the use of a solution of the nitro-saccharate of lead, from its exerting a strong solvent action on phosphatic calculi. More recently still, Dr. Bence Jones has shown the possibility of the solution of lithic and phosphatic stones when placed between the poles of a galvanic battery; and he has succeeded in constructing an instrument to effect this desirable end, which can be introduced within the bladder (Druitt's "Surgeons' Vade-Mecum," eighth edition). Mr. Ure's plan, however, is the only one that we have had an opportunity of seeing adopted in hospital practice; and now that carbonate of lithia, the substance he employs, can be obtained more abundantly than formerly, since the publication of Dr. Garrod's work on "Gout," Mr. Ure considers that in certain cases of calculus it might be advantageously employed conjointly with lithotrity, as he originally suggested in his memoir published in 1843.

Carbonate of lithia is obtained from *lepidolite*, a hard silicious mineral containing three or four per cent. of the lithia. This alkali is a constituent of the aërated lithia water recently prepared by several chemists under the directions of Dr. Garrod; and is combined with either potash or ammonia. There is a point of importance, however, in the internal use of carbonate of lithia as a medicinal agent, which must not be overlooked,—namely, that it forms a nearly insoluble triple phosphate with phosphate of soda, or with the triple phosphate of ammonia and soda—salts generally present in animal fluids. Hence, Mr. Ure does not recommend the internal use of this salt in the treatment of vesical calculus, for the reason that it would undergo decomposition and precipitation when coming in contact with ammonio-phosphate of soda, and thereby be rendered inert. In corroboration of this, we find the celebrated chemist Rose says that if the liquid containing a salt of lithia be mixed with a solution of ammonio-phosphate of soda, an abundant precipitate is formed after standing a short time, which character distinguishes lithia from soda and potash. The double salt of phosphate of soda and lithia, according to the same authority, is insoluble, or very sparingly soluble.* The value of carbonate of lithia internally for other than calculus affections has, therefore, yet to be determined by experience. Mr. Ure has found by direct experiment that a uric-acid calculus can be diminished at the rate of a grain an hour, by the presence of a regulated solution of the salt in the bladder; and its solvent power has been confirmed by Binswanger and many other German authorities.

Before injecting a solution of the salt of lithia the bladder is washed out by means of distilled water to get rid of all the phosphates in the urine, which would necessarily decompose it; and then the further steps are adopted as detailed in the notes of the case. We had an opportunity of examining the patient several times, as well as some of the minute fragments of calculi; the latter seemed to be much disintegrated, and readily broke in the blades of the lithotrite; in fact the stone was comparatively soft and friable.

We can do no more on the present occasion than draw attention to the subject of litholysis, which may ultimately be found worthy of more consideration than has been heretofore bestowed upon it.

W. B——, aged fifty-six, married, admitted May 20th, 1859, with stone in the bladder. The patient observed, soon after Christmas last, that he experienced pain while voiding urine, and that this was dark colored. He had medical attendance in the country. A month or six weeks prior to the date of his admission, he had calls to void urine as often as twenty times a day: and five days previously he was sounded by a surgeon, who detected the presence of a stone. On admission, he was sounded, and the calculus was readily found. He complained much of pain referred to the neck of the bladder and at the extremity of the penis during and after micturition. His general health seemed good in other respects. A careful examination of the urine was made. It was limpid when voided; of specific gravity 1024; it deposited spontaneously, when allowed to stand, lozenge-shaped crystals of uric acid, and also a few octahedral crystals of oxalate of lime; the amount of phosphates was small; it contained a trace of albumen, and some mucus. Mr. Ure, believing the calculus to consist chiefly of uric acid,—which was eventually proved to be the case,—determined to try the solvent power of carbonate of lithia, a remedial agent which he introduced to the profession several years ago in a paper published in the *Pharmaceutical Journal*, vol. iii., entitled "Observations and Researches upon a new Solvent for Stone in the Bladder."

Accordingly, on May 30th, 1859, he commenced the employment of a solution of carbonate of lithia. He emptied the bladder with a No. 9 catheter, as a preliminary step, to obviate decomposition of the carbonate of lithia from the presence of phosphates, phosphate of lithia being comparatively insoluble; and having next washed out the bladder with a little distilled water at a temperature ranging between 80 deg. and 90 deg. Fahr., he injected a solution of carbonate of lithia, containing two grains to the ounce, at a temperature of 84 deg. Fahr. From two to three ounces of the solution were retained in the bladder. Mr. Ure saw the man in the course of half an hour, who said he felt no inconvenience whatever. The patient had no call to empty his bladder till two hours and a half had elapsed. The only trouble he experienced afterwards was difficulty in retaining his urine at night.

June 1st.—To counteract the continued deposit of uric acid, Mr. Ure prescribed a mixture, which he has found serviceable in such cases, composed of phosphate of soda, with infusion of uva ursi and tincture of henbane.

2nd.—The man felt easier than formerly. The injection was repeated, of the strength of one grain of carbonate of lithia to the ounce of distilled water.

13th.—The injection, as above, had been resorted to every other day. The patient was much easier than when he entered the hospital, and experienced little or no pain. There was a notable diminution of the ropy mucus which used to come away.

The above treatment was pursued every second or third day during some weeks, the patient remaining in a comparatively comfortable state, but there was no evident reduction of the size of the calculus. In order, therefore, to expedite matters, it was determined to crush the stone by means of the lithotrite. This procedure was accordingly had recourse to at suitable intervals, and considerable quantities of calculus were got rid of. It almost seemed as if the employment of the solvent had in some measure lessened the cohesion of the concretion, and increased its friability. The case was advancing steadily, and seemingly approaching a conclusion, when the patient got into a state of extreme depression, and during Mr. Ure's absence from town in the autumn succumbed. On cadaveric inspection, it was ascertained that another calculus lodged in the bladder.

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* Practical Treatise on Chemical Analysis, by H. Rose, p. 15.

UNIVERSITY COLLEGE HOLPITAL.

A FISH-BONE LODGED IN THE ŒSOPHAGUS, PERFORATING THE DIAPHRAGM AND HEART, RESULTING IN DEATH.

There is no part of the body more commonly subject to the lodgment of foreign substances, than the œsophagus, and this can be readily understood when the peculiar function of the part is remembered. When the foreign body is not so large as to affect the breathing, there is no imminent danger to life, although the patient may complain of a sense of choking, with a suffocating cough, from the irritation produced. On the other hand, when the obstruction is caused by a large piece of meat, pudding, or other substance, suffocation is at once produced by spasm of the glottis, resulting from the pressure of the foreign body on the trachea. Examples of both forms of obstruction are frequently brought before the notice of the public. Sharp-pointed substances, like fragments of bone, needles, pins, or nails, are very liable to be caught in some fold of the mucous membrane, and to become impacted, and fortunate indeed is the patient if they are then safely extracted. In certain instances the sharp body will penetrate the gullet, and wound the windpipe, or in rare examples it may perforate the heart and cause death. The case of the juggler, admitted some years ago into University College Hospital, cannot have been forgotten. He attempted to swallow a blunted sword; the blade perforated the œsophagus and wounded the pericardium, death occurring in the course of a few days. Bones of all kinds, but particularly those of fish, have very commonly caused obstruction, and sometimes serious mischief. During the past summer an instance of the kind was admitted into this hospital in the person of a female, but who had already ceased to breathe, and no satisfactory history could be obtained about her sudden illness. A post-mortem examination revealed the presence of a fish-bone perforating the stomach close to the cardiac end of the œsophagus, then the diaphragm and pericardium, and lastly the substance of the posterior surface of the heart, there inflicting a jagged wound in the middle of its septum, immediately over the right coronary artery and vein, and puncturing the latter vessel. The cavities of the heart were not invaded, but the pericardium was filled with a pint and a half of fluid blood mixed with filaments of fibrine, arranged in a net-like form; the blood was poured out by the wounded vein. The force exerted to push the fish-bone through all these structures must have been considerable, and is one of the most interesting points in the case. It is very probable that the bone was first impacted at the lower end of the œsophagus, as supposed by Mr. Andrew, and that a large mouthful of food was then swallowed, which must have pushed the bone onwards by the natural muscular contraction of the tube itself. The blunt end may have been lying in the cardiac extremity of the œsophagus, whilst the sharp end was in actual contact with the surface of the stomach, and as the body was pushed onwards by the food, so would it shift the position of the blunt end into the stomach, which would thus explain its position there. We are indebted to Mr. Andrew, the resident medical officer to the hospital, for the following account of the case and post-mortem examination, together with the appended remarks.

We recollect reading the details of another case of death resulting from a wound of the heart by a fish-bone, but have been unable to find a reference to it. With regard to the following example, we may remark that, although it was briefly mentioned in some of the daily journals, it presents so many points of interest that it is well worthy the attention of the profession.

The previous history was, unfortunately, very obscure. The woman was a hawker by trade, and had no fixed dwelling-place, but wandered here and there according to the calls of business. Not even her name or age could be ascertained. On the day of her death, however, as appears from the evidence of a casual witness, she suffered from severe pain in the chest, accompanied by a feeling of faintness which compelled her to rest on a doorstep, whence she was removed to University College Hospital. On admission, she was warm, but life was quite extinct.

The post-mortem examination, which was made as soon as the coroner's order could be obtained, showed the following lesions:

On removing the skull-cap, the brain, with the exception of presenting an almost empty condition of the bloodvessels, was normal, and its substance firm and consistent. The thorax next being opened, the pericardium was at once seen to be distended and bulging from contained fluid—namely, one pint and a half of blood. No clots were found; but passing in every direction from the surface of the heart to the pericardium, but especially from the front, was a net-like arrangement of cords, apparently consisting of fibrine, and resembling in appearance the thread-like mass obtained by whipping blood with a bundle of twigs; it did not at all simulate the locular honey-comb or thread-like exudation of lymph which is seen in some cases of pericarditis. The blood being all carefully removed by a syringe, the heart was found small and contracted, but no rupture of its surface or of an aneurism connected with it could be detected. A very minute examination was now made, when, on passing the finger along the posterior surface of the pericardium, it came in contact with a sharp foreign body, which evidently had transfixed the membrane. On lifting the heart up, a jagged wound could readily be detected on its posterior surface corresponding with the point of the foreign body, and situated on the septum, its middle part, and immediately over the descending branch of the right coronary artery, with its accompanying vein; the latter it had punctured: this was afterwards proved by dissection, and by injecting the coronary artery, when the fluid returned by the veins, and poured out of the torn one, but not out of the artery. To render the further dissection more easy, the whole contents of the thorax, together with the diaphragm, stomach, and liver, were removed *en masse*. The stomach was then opened, and the contents being removed, the foreign body was found to be a fishbone, the blunt end of which projected into the cavity, while the other portion had pierced the wall close to the cardiac end of the œsophagus (a stitch was at once introduced to keep the bone in its exact position); it had then passed through the diaphragm and pericardium, causing some slight extravasation of blood between these tissues; and lastly into the substance of the heart, as before mentioned. The cavities of the heart were quite empty—not even a clot could be found; neither of these had been opened by the external wound. As to the other organs, the lungs were bound down by pleuritic adhesions, but otherwise healthy; so likewise the liver, kidneys, and intestines. Amongst the contents of the intestine were found two or three fragments of fish-bones, probably of the same kind as the other, but discolored and partially digested.

The chief points to be dwelt on in this case seem to be as follows;—First, the manner of death, which appears to have taken place by slow syncope, proved by a large quantity of blood extravasated, the absence of large clot, and the consolidation of the fibrine in the form of threads. The heart, in fact, had acted as a churning apparatus, and whipped the blood, so to speak. The jagged appearance and large size of the wound, when compared with the sharp end of the fish bone, must have been produced slowly by being rubbed against the projecting point during the action of the heart. No wonder the poor woman complained of pain in the cardiac region! The impediment to the expansion of the heart, from the pressure of the surrounding blood, no doubt also aided in the fatal result; but yet this could not be great, for the organ had still sufficient power to empty its contents at the last contraction. All signs, then, go to prove that dying was a process of hours, rather than of a less time. The bone itself, shaped somewhat like an arrow, was one inch and seven-eighths in length, slightly bifid at its blunt end, triangular in its greatest extent, but flattened and wider at the point than elsewhere; it was quite free in the pericardium for one-fourth of its length, and in the stomach for seven-eighths of an inch, so that only half an inch was imbedded in solid tissue. The bone has been shown to Professor Owen, who kindly examined it, and he considers that it is one of the upper or lower spines of a common flounder. Why it should not have fallen into the stomach when it had reached thus far is very remarkable. So, also, it is very difficult to explain the force which pushed it onward through the various tissues until it had even reached the heart; still more difficult as the force, wherever derived, was active. The transfixion must have been rapid, as the extravasated blood between the diaphragm and pericardium was quite recent. It could not be referred (as in the passage of some foreign bodies) to the movements of the body, gravitation, &c., or, as seen in the exfoliation of bone, to granulations springing up and gradually pushing the dead mass onwards.

One or two suggestions, however, occur to one's mind. Could a blow on the stomach from the outside be so suddenly applied as to produce the puncture? It is thought not; for the direction is opposed to this idea—viz., from behind forwards and upwards so as to enter the posterior surface of the heart. Would the force of the peristaltic action of the stomach be sufficient for the purpose? The experiments made on Alexis St. Martin by Dr. Beaumont show that this viscus is at times endowed with considerable power, especially at the pyloric portion. The most likely explanation appears to be, that the bone came in a perpendicular direction down the œsophagus, with its pointed end formost; that by some accident it got caught in the mucous membrane of the stomach, close to the cardiac end of the œsophagus; that, being followed by a mass of food, this aided by the peristaltic action of the tube, pressing on the blunt end, pushed the point still further in; and at the same time, as the mass descended into the stomach, it would tend to cause the bone to make a revolution, so that the point would be directed upwards, and very probable the entire transfixion took place at the same moment, for the condition of parts as mentioned above indicates rapid transfixion; or the passage might have been also assisted by the movements of the stomach.

ST. GEORGE'S HOSPITAL.

CASE OF EXTENSIVE INJURY TO THE HAND; RECOVERY, WITH ALMOST PERFECT USE; AN ATTACK OF SCARLET FEVER IN THE INTERVAL.

(Under the care of Mr. Prescott Hewett.)

W. H——, aged fifteen, was admitted Jan. 4th, 1860. About ten hours before admission, this boy was holding a tin flask full of gunpowder in his right hand, and shaking some powder over a match. The whole of the powder exploded, blowing the flask to pieces, and all but separating the thumb from the hand. On admission, the thumb was found hanging so loosely that it could be laid flat upon the forearm. The parts between the first and second metacarpal bones were torn across down to the carpus, and the carpal joint of the thumb was widely laid open. A bit of the first metacarpal bone was broken off, and the cartilage covering the trapezium was lacerated. The short muscles of the thumb were all extensively ruptured; but the tendon of the long flexor had escaped. There was profuse hæmorrhage from several large arteries; and amongst these were the superficial and deep palmar arches. Seven ligatures having been applied, the thumb was placed in its natural position, and retained there by a broad piece of strapping. The hand was put upon a splint, and cold-water dressing applied. Everything progressed most favorably for five days; but on the 9th of January the boy was attacked with scarlet fever. The disease presented itself in its mildest form; and in a few days the rash died away, leaving him, however, in a very weak state.

On the 22nd, diffuse cellular inflammation set in, which went on until the whole of the hand and the lower fourth of the forearm were affected. Extensive suppuration ensued, incisions were made, and a considerable quantity of pus evacuated. At one time it was feared that the wrist joint might become implicated, so severe was the surrounding inflammation; but this gradually subsided. During the whole of this period, he was kept up by wine and tonics. Under this treatment he improved so much that he was able to be sent into the country at the end of February.

A few weeks since the boy presented himself at the hospital in excellent health, and with the wound altogether healed; and notwithstanding the extensive damage done to the carpo-metacarpal articulation, there was a good motion in the joint, and the fingers had, for the greater part, regained their flexibility, but the wrist-joint was still somewhat stiff.

In the remarks made upon this case, Mr. Prescott Hewett referred to a very similar one which he had had under his care some years ago. It was that of a gentleman in whose right hand a powder flask had also exploded. The wounds were nearly identical to those above described, but the carpo-metacarpal joint was not laid open. Most of the small muscles of the thumb were torn to shreds, so much so that it was necessary to remove a great part of them; and the tendon of the long flexor was extensively laid bare. The case, however, did well; and in six weeks there was free use of the hand and thumb once more. Years have rolled on, and now, for the first time, this gentleman has found out that there is some power wanting about the thumb. Having joined the volunteer rifles, he finds that there is not sufficient strength in the thumb to pull out his ramrod: this, however, he has now learnt to manage by means of two of his fingers.

NORFOLK AND NORWICH HOSPITAL.

REPORT OF CASES OF CALCULUS VESICÆ OPERATED ON DURING THE YEARS 1858 AND 1859.

(*Reported by* Mr. Chas. Williams, House-Surgeon.)

During the last two years, twenty-two cases of stone in the bladder have been admitted into this hospital and operated on. Success attended every case, save one. The ordinary lateral operation was performed in thirteen, the median in eight, and in one (a female) the calculus was removed by dilatation.

Case 1.—David W——, aged thirty-three, a miller, was admitted in December, 1857, suffering from hæmaturia. He is a strong, healthy-looking man, belongs to Norfolk, but has resided for the last two or three years chiefly in London. Nearly three years ago, and shortly before he went to London, the early symptoms of stone commenced, but were very slight. About two years since, he was seized with retention of urine. A surgeon prescribed medicine, and ordered him to sit over hot water. From this period to the present he has voided urine in large quantity and on frequent occasions. He was, on account of this symptom, a patient at a London dispensary for five months, and a year and a half ago was admitted into one of the large metropolitan hospitals. The hæmorrhage was checked, but no suspicion of calculus was entertained. About nine or ten months ago he went to work in Yorkshire, but the bleeding returned, and he came back to Norfolk, entered this hospital under the care of Dr. Copeman, and was shortly after transferred to Mr. Cadge.

During the whole of the period named in his history he suffered no great amount of pain. He complains of uneasiness over the hypogastric region, and to some extent also in the urethra after micturition. He micturates two or three times in the night, and three or four times during the day. Sometimes his urine is free from blood for a month; at other times one-half of it seems to be composed of blood. Generally the blood is intimately mixed with the urine; occasionally it comes pure after the urine has escaped. He sometimes passes or pulls from the urethra thin strings of coagula. When the urine is most free from blood it is neutral or faintly acid, specific gravity 1015, and lets fall a flocculent sediment composed of muco-purulent matter and phosphatic crystals.

Finding the hæmorrhage continue after a short residence in the hospital, Mr. Cadge was requested to examine the bladder, who, on pressing a sound, at once came on what appeared to be a large rough stone, fixed by the bladder being closely contracted over it.

On January 1st, 1858, Mr. Cadge performed the lateral operation. The stone was of considerable dimensions; and as it was being slowly and carefully extracted, it broke down, and a quantity of black gritty detritus and pieces came away. The bladder was emptied by the forceps and scoop, and then syringed out with warm water. Some of the *débris* of the stone was lost, but that which was saved weighed two ounces. Amongst the fragments was found what appeared to be a perfect mulberry-stone, of the size of a common mulberry, rough, and covered with blood and sabulous matter mixed; this evidently formed the nucleus of the large calculus. The body consisted almost entirely of altered blood, quite black, imperfectly disposed in laminæ, and covered with a thin crust of whitish earthy deposit. In short, the structure seemed to be this: an oxalate of lime nucleus; then alternate layers of blood and calculous matter, the former thick, the latter thin; the outer crust was raised into tubercles, and was so thin that, at parts, the dark subjacent layer of blood was visible through it.

No unfavorable symptom occurred during the progress of the case, and he was discharged, cured, on the 20th February.

Case 2.—Robert R——, aged sixty-eight, a laborer, fell off a scaffold about five months since, and was much shaken and bruised. Ten days afterwards he discovered something amiss with his urine, which was thick and bloody, and caused him much pain to pass it. After this, he could seldom retain his urine for any length of time, and experienced pain at the orifice of the urethra, as well as a sensation of wanting to pass more urine after the last few drops. On admission, Mr. Nichols sounded him, and discovered a stone in the bladder. Shortly after, lithotrity was attempted; but the urethra was of so small a calibre that only a No. 7 lithotrite could be passed; and although a calculus was seized and crushed, still very few, and those but the smallest, fragments could come away; while the existence of at least another calculus was made sensible by the instrument striking against it. Under these circumstances Mr. Nichols deemed it unadvisable to proceed with this mode of treatment, and proposed that the stones, should be removed by lithotomy, which he performed on February 19th. Seven calculi were extracted, weighing two drachms and a half; of smooth, oval form; light-brown color; and consisting of uric acid. Discharged, cured, April 10th.*

Case 3.—Robert J——, aged six years, has had symptoms of stone for the last three or four years; does not suffer much pain. He has a desire to micturate very often, and only passes a few drops at a time. The urine is of normal character. Mr. Cadge, on sounding him, detected a calculus; and, on the 26th of February, performed the usual lateral operation. A stone, consisting of uric acid, and weighing two scruples, was removed. Discharged, cured, thirty days after.

Case 4.—George G——, aged thirty-two years, laborer, received an injury some fourteen or fifteen years ago, after which he passed blood in his urine; but he recovered from this, and remained well until two years since, when he became troubled with retention of urine, due to the impaction of a stone, of the size of a pea, just within the orifice of the urethra, from which it was extracted by surgical means. From that time he was free from vesical irritation until eight months back, at which period retention of urine again occurred, and extended over four days. He was relieved by a surgeon, and continued to follow his occupation until three weeks previous to admission. When his symptoms, which had been in existence for some time, became more aggravated, and he was compelled to seek for admission into this hospital, the evidence of the existence of a stone in his bladder was obtained by means of a sound, a gentle use of which gave him considerable pain. On the 9th of April, Mr. Cadge removed the stone by the lateral method. The calculus, in shape like a cocked hat, weighed fourteen drachms; the nucleus consisted of oxalate of lime, coated with urates, and these were capped with the phosphates. Dismissed, cured, June 10th.

Case 5.—Walter W——, aged five years and a half, admitted April 3rd, having the usual symptoms of calculus vesicæ. During the times he is micturating, he strains so violently as to cause prolapsus of the rectum. On sounding his bladder, the presence of a stone was readily manifested; and lithotomy was performed by Mr. Cadge on the 9th of April. The calculus weighed nearly three drachms, and was composed of lithic acid. Dismissed, cured, May 8th.

Case 6.—Adcock B——, aged seventy-four, farm-laborer. Has had symptoms of stone for the last eight or nine years, and for the last two they have been of considerable severity. He has often passed hæmorrhagic urine. Micturates every few minutes, and suffers intense pain. There is a large quantity of pus in his urine. Has œdema of the lower extremities, and a waxy look, together with stiffness of his joints. After his admission he began to improve considerably in health, the quantity of pus diminished, and he gained flesh. Still, his sufferings were so intense that he was willing to submit to any mode of treatment, even though there was a probability that death would result. The lateral operation was performed by Mr. Cadge on the 28th of May, and two smooth and flattened oval-shaped calculi removed. The two weighed eleven drachms, and consisted of uric acid. The middle lobe of the prostate was enormously enlarged, and offered considerable impediment to the extraction of the calculi. The wound was long in healing. Eventually it did heal, and the patient left the hospital on the 14th of August, in a weak and feeble condition, though in a fair state of health, and free from any suffering.

Case 7.—George H——, aged fifty-nine, porter, had symptoms of stone in the bladder for two years. During the last two months the symptoms have been very severe; he has been obliged to micturate every few minutes; his urine has been bloody. A fortnight ago he passed a small stone; this afforded no relief, and he was sounded by Mr. Nichols, who readily detected a stone in his bladder. He is a strong, healthy-looking man, and very anxious to be operated on. This was effected by Mr. Nichols on the 23rd of July, the usual operation being performed. The calculus consisted of uric acid, and weighed seven drachms and two scruples. Discharged, cured, August 28th.

Case 8.—William P——, aged fifty-nine, farm-laborer, a fat, sallow-looking man. Sixteen months ago, he caught a severe cold. After this had left him, he was surprised to see blood in his urine, which he continued to pass for the next three weeks. At the end of this period, it ceased to appear, and has not been noticed since. He complains of a burning pain when he micturates, which he is obliged to do as often as twenty or thirty times in twenty-four hours: his urine is 1015, and contains a considerable quantity of pus; there is an œdematous condition of the right thigh and leg, which he attributes to a "diarrhœa fever" that he suffered from for several weeks about a year ago. He was sounded by Mr. Firth, who detected a calculus, which was extracted by the lateral method on the 13th of August. The stone weighed two drachms, was orbicular, with slightly flattened sides, and composed of uric acid. The whole of the calculus was coated with shining crystals of phosphate of magnesia and ammonia. His urine had become perfectly normal in quality and quantity before his discharge. The œdema of the right lower extremity still remained.

Case 9.—Henry M——, aged sixty-one, weaver, admitted on the 31st of July, under the care of Mr. Crosse. Is a thin, sallow-looking man, in tolerably good health. Two years and a half ago, he began to feel all the inconveniences of stone in the bladder—viz., continuous pain in the pubic region and at the end of the penis; frequent desire to micturate, great pain accompanying the act, as well as preceding it; sometimes total inability to pass his urine; and the urine being generally high-colored and sometimes thick and hæmorrhagic. These symptoms have continued to the present time. Mr. Crosse, having detected a calculus, performed the lateral operation on the 13th of August, and removed a stone, of uric-acid formation, which weighed an ounce and thirty-seven grains. Discharged, cured, on the 18th of September.

Case 10.—James H——, aged seventy, pensioner, was lithotomised, by Mr. Nichols, on the 27th of November last, and several small calculi, altogether weighing three drachms, were extracted. He was discharged, cured, Jan. 9th, 1858, and readmitted a few weeks afterwards with symptoms of stone in the urethra, from which some small fragments were removed through a fistulous opening which existed in the perinæum, by Mr. Crosse. After this he was carefully sounded, but nothing could be detected either in the urethra or bladder, and he was accordingly dismissed. Ere long, symptoms of stone again became manifest; he was readmitted July 19th, and, on sounding him, a calculus was felt. Mr. Nichols performed the median operation on August 27th, and removed a phosphatic stone, which weighed two scruples and sixteen grains. Discharged cured, Sep. 18th.

Remarks.—In this case there existed a remarkable tendency to the production of calculus. At one time uric-acid calculi would form; at other times phosphatic ones; and he had been cut for stone so many times during the last few years that he could not, by any possibility, reckon the number. He had only been operated on twice in this hospital.

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* This patient was readmitted five months later. See case 11.

Case 11.—Robert R——, aged sixty-eight, laborer, readmitted Sept. 4th. He states that shortly after his dismissal in April, he noticed that his urine was bloody, and that the same symptoms which he formerly experienced of stone in the bladder were again commenced in a mild form, but gradually became more severe, until he was compelled to seek for advice. Mr. Nichols at once sounded him, and detected a stone. On Sept. 24th, the median operation was performed, and two irregularly formed calculi of uric acid, weighing two drachms, extracted. The wound healed well, and the man left the hospital, cured, Oct 23d.

Case 12.—Maria D——, aged fifty, the mother of seven children, states that in Oct. 1856, she was ill for several weeks with a severe cold. During the latter part of this time she passed blood in her urine, and noticed that her stream used to stop suddenly. At Christmas she came into this hospital, and her bladder was repeatedly examined, but no calculus could be detected. At the end of thirteen weeks she left the hospital with an improved condition of health, but the local complaint much in the same state as when she was admitted. Her symptoms became gradually more severe, and she sought for advice as an out-patient under Mr. Cadge in November, 1857, and shortly after voided at different times two or three small calculi. She was now much relieved, and in March, 1858, was discharged cured. Soon after, the former symptoms reappeared, and were so intense as to induce her to take opium, of which she has often taken as much as three grains in a day. Failing to obtain relief, she presented herself again for admission, with the following symptoms:—Complains of constant pain in the pubic region; has a desire to void her urine very frequently during the day and night. Now and then the stream stops abruptly, and she frequently observes clots of blood in her urine, which is of normal quantity, acid; the specific gravity ranges from 1005 to 1015, and at one time contains a small quantity of pus, at another clots of blood. Mr. Cadge carefully examined the bladder with a sound, and after much trouble and considerable difficulty succeeded in detecting the stone. Such being the case, dilatation of the urethra was proposed, and performed by means of Weiss's trivalve dilator, and a small irregular calculus, weighing four grains, was extracted.

This woman got perfectly well; no incontinence of urine followed, and she left the hospital October 9th.

Case 13.—Joseph P——, aged sixty, a gardener states that about six years ago he had a "sharp cutting pain" when he passed urine, and this symptom, which did not increase in severity, continued for three years; then his urine became hæmorrhagic, and the stream used to stop suddenly. A year later he voided two small uric-acid calculi, and his symptoms left him for six months; at the end of this period they reappeared, and have continued to the present time. He is a short spare man, in good health; he has the usual symptoms of stone, and on sounding the bladder Mr. Firth readily detected one. On October 29th the lateral operation was performed, and a single calculus, weighing three drachms, was removed. Its form was orbicular, with depressed sides, which were raised into tubercles and coated with shining crystals of oxalate of lime. Discharged, cured, November 27th.

1859.—**Case** 14.—**Edward S——, aged fifty-two,** farm-laborer, is a strong, healthy-looking countryman. He states that about three weeks after last Michaelmas he felt a desire to be constantly passing his urine; and, on one or two occasions, observed some blood in it, and used to get up frequently during the night to empty his bladder. He has never passed any calculi; and has been getting worse lately. He complains of pain after micturition; is in good health; does not suffer from dyspepsia or rheumatism; urine is pale, clear, specific gravity 1020, and contains abundance of oxalates; has lived mostly on farinaceous food and cider. Indisputable evidence of the presence of a small calculus having been obtained by means of the sound, on March 11th Mr. Cadge removed it by the median operation. The stone weighed one drachm and twelve grains, and consisted of the mixed phosphates capping a nucleus of uric acid. No untoward symptoms arose; and he was discharged, cured, April 16th.

Case 15.—William S——, aged thirty-one, a baker, The first symptoms of stone commenced about six weeks before last Christmas. He could not micturate without experiencing much pain, and blood often appeared in his urine. These symptoms, together with the others usual to stone, increased in frequency and severity up to the time of admission. He is a thin, short man; in good health; has had neither rheumatism nor dyspepsia; and has lived well for many years past, taking meat for dinner every day. Having detected a calculus, Mr. Crosse proceeded to remove it by means of the lateral operation, on the 25th of March. The operator and his colleagues, on placing their fingers in the bladder, felt a distinct eminence at the neck, as if the middle lobe of the prostate were enlarged, and protruded upwards into the viscus. The stone weighed one drachm, was composed of uric acid, and closely resembled a cocked hat, its under surface being concave and corrugated. Discharged, cured, April 16th.

Remarks.—The enlargement of the middle lobe of the prostate in so young a subject is remarkable; for such an abnormal condition is not met with in adults—at all events, not that augmentation commonly seen in old men. This increase of size is of a very dubitable character, unless we can suppose it to be an abnormal development of the gland. If not this, then it may be either fibroid tumour or cancer. Respecting the former, Rokitansky tells us that they "occur frequently, and generally induce considerable hypertrophy of the gland; they are commonly of the size of a pea, bean, or hazel nut, round or oval, and, when deposited in the peripheral layer of the gland, give rise to nodulated protuberances."* With regard to cancer, it rarely attacks the prostate; still it has been met with even in children, and is generally of the encephaloid variety. The peculiar form of the calculus is, no doubt, due to its having moulded itself by its accumulating particles on the eminence just referred to, from which, as it was found lying loose in the bladder, it was no doubt struck off either by the sound or staff. The prominence of the prostate most likely offered some impediment to the discharge of the urine, and probably by ulceration or removal of its mucous membranes; or, in the absence of either, a deposit of salt took place on it, and this formed a nidus or nucleus for the rest which followed; and thus the calculus was, in all probability, shaped.

Case 16.—Robert G——, aged thirteen. His parents state that he has never passed his urine freely since his birth; and after he left his cradle they noticed that he did not empty his bladder completely;

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* Sydenham Society's Translation, vol. ii., p. 259.

a small quantity usually came away, and then in a minute or more he would pass more, and in this way empty his bladder. Occasionally he had severe pain during micturition. These symptoms gradually increased in severity, and when at work in a brickyard he was often obliged to desist on account of his sufferings. For the last two months he has had incontinence of urine, and constant pain in his bladder and urethra both day and night. He looks as if he was nearly worn out; is thin and pale, and has the countenance of an old man. He stoops much in his gait, and walks deliberately and slowly. Some years ago he used to crawl around on his hands, as he found this mode of progression gave him much less pain than walking. He has lived mostly on bread and milk.

Mr. Firth having sounded him, and detected the presence of a stone, proceeded to remove it by the lateral plan, July 15th. Great difficulty was experienced in extracting the calculus on account of its size; it proved to be a beautiful specimen of a mulberry calculus, of a dark-brown color and globular form, covered with large tubercles. It weighed one ounce. Dismissed, cured, August 13th.

Case 17.—William M——, aged four, had suffered under symptoms of calculus since he was six months old; they showed themselves in a frequent desire to pass urine, accompanied with a difficulty in voiding it, and he was sometimes a long while before he could void any. His mother has often noticed "white grit" on his napkins. His sufferings have been more severe during the last three or four months. He is a stout, healthy-looking child. The urine contains crystals of uric acid; no albumen; specific gravity 1022.

Mr. Firth having obtained evidence of the presence of more stones than one in the bladder, removed them on the 22d of July, by the median operation, in the following manner:—A grooved staff was introduced into the bladder, the forefinger of the left hand passed into the rectum, and the point of the finger pressed against the staff to steady it. A long and straight narrow-bladed finger bistoury was introduced, with its cutting edge upwards, a little in front of the anus, and carried forwards so as to strike the groove in the staff; the tissues of the perinæum and the membranous portion of the urethra having been divided, a probe was next passed along the groove of the staff into the bladder, and the staff withdrawn: the finger, previously oiled, was then introduced, with a semi-rotatory motion, into the viscus; and as there was a difficulty in seizing the calculi with a forceps, they were removed by means of a slender scoop. The stones, three in number, were of a light-fawn color, consisted of uric acid, and weighed thirty-three grains. The urine for the first four days was voided chiefly by the wound; at the end of the ninth day it flowed wholly through the urethra, and the child recovered without an unfavorable symptom. Dismissed, cured, August 20th.

Case 18.—John H——, eighteen months old. Has suffered from birth more or less pain passing urine. He is a lively child, with fair complexion and light hair. Has an angular-curved spine, a clean tongue, and a tolerably good appetite. Is free from pain, except during the acts of micturition, which are always attended with loud screaming and constant pulling at the end of the penis. The urine is of a pale-lemon color, acid; specific gravity 1025; it contains a small amount of pus; and on microscopical examination no casts could be discovered.

He was sounded, and a calculus plainly felt. The median operation was performed, much in the same manner as in the foregoing case. There was considerable difficulty in seizing the calculi. After many attempts they were removed—two in number, of a pale-yellow color, slightly tuberculated, and weighed half a drachm.

The child was placed in bed. He cried much for two or three hours after, and then became quiet, screaming whenever his urine came away through the wound, which it did freely, and was very slightly blood-stained. At ten in the evening he was quiet, not sleepy, and disposed to be talkative.

Sept 24th.—One A.M.: Was restless, and constantly calling for something to drink.—Seven A.M.: Became suddenly worse, and died soon after.

No autopsy.

Case 19.—John W——, aged sixty-four, farm laborer. Is a short, strong, wiry-looking man. States that about six years ago symptoms of stone appeared. He was admitted into this hospital in December, 1853; and Dr. Nichols crushed the stone at seven sittings. At the end of the following month he was discharged, and remained free from vesical irritation for two years, at the close of which period the symptoms reappeared. He then went to Mr. Nichols' house, where a calculus was detected, and he was lithotritized, and went home the same day. As he derived no benefit, and was getting worse, he sought readmission into this hospital in April, 1856. Lithotrity was again resorted to, and the stone crushed at five sittings. He was dismissed in June, free from any symptoms of stone, though they were soon urgent again, and he came here in February, 1857. The lithotrite was used, and the weight of the *débris* removed exceeded two scruples; but as the number of calculi appeared considerable, and his health was failing, it was thought better to remove them by lithotomy. The lateral operation was accordingly performed by Mr. Nichols in the following May; the calculi extracted weighed four drachms. In June of the same year he was discharged, cured, and remained well until August, 1859; at this time the usual symptoms recommenced, and increased in intensity so greatly that he was compelled to seek for relief by coming into the hospital in October, 1859.

A sound was passed along the urethra, and was stopped at the membranous portion by a stone, which seemed to be rather firmly impacted in the canal. Mr. Nichols succeeded in getting the sound beyond it, and without difficulty detected a calculus in the bladder.

The median operation was resorted to, as it permitted the removal of the stone in the urethra, in which it was found lying, partly in the membranous and partly in the prostatic portion of the canal. It was of irregular shape, and had several sharp angles, and was composed of uric acid. The depressions on it were filled up with phosphatic material. It was evidently a piece of calculus. On examining the interior of the bladder with his finger, Mr. Nichols found that a portion of the walls of this organ was encrusted with a thick layer of calculous matter. As much of this was broken down and removed as was considered compatible with the safety of the patient. The *débris* extracted was phosphatic, and weighed nearly three drachms.

This man was in a very precarious condition for many days; he rallied, however, and recovered, leaving the hospital on the 27th of November, free from any irritation of the bladder, and in very good health.

Case 20.—John P——, aged fifty-four, farm-laborer. Premonitory symptoms of stone were noticed two years and a half ago, and since that time he has had the usual symptoms in a more or less severe degree. At last they became too intense for him to endure them longer, and he sought for relief at this hospital. Mr. Nichols, having detected a calculus, removed it by lateral operation on the 28th of October. The stone weighed one ounce, was of a flattened, oval form, and composed of uric acid. Fourteen days after the operation, a pyæmic abscess formed in his right shoulder. This yielded to treatment, and he was dismissed, on the 3rd of December, in a good state of health, and the wound perfectly healed.

Case 21.—James C——, aged sixty-seven, laborer; is a thin, cadaverous-looking man; states that a year and three-quarters ago he had much pain in passing his urine; used to get up often during the night to empty his bladder; the stream frequently stopped very suddenly, and he sometimes noticed blood in his urine; he has been subject to rheumatism for the last forty years; has never suffered from dyspepsia, and has lived mostly on farinaceous diet. The urine is pale, and contains a large quantity of mucus and pus; specific gravity 1018; no urinary casts in it. On being sounded, Mr. Cadge detected a stone lying behind an enlarged middle lobe of the prostate.

Nov. 18th.—The median operation, as recommended by Mr. Allarton, was performed, and a flat, oval, uric-acid calculus, weighing three drachms and a half, removed. On the second day, he passed most of his urine at will, per urethram. A small quantity trickled through the wound at each act of micturition. On the ninth day after the operation, he was suddenly seized with angina pectoris, from which he recovered. After this, no other unpleasant symptom showed itself, and he was dismissed cured on the 17th of December. The wound had healed well, his urine was of healthy consistence, and his general health in excellent condition.

Case 22.—James L——, aged sixty-one, is a tall, well-made, healthy-looking farm-laborer. Has no symptoms of any disease, save those peculiar to stone; his urine is normal in quantity, contains a good deal of pus, but no tubular casts; specific gravity 1016. He has had symptoms of stone for one year, though for three or four years previously he frequently passed small calculi. Has suffered much from rheumatism, but never from dyspepsia. The presence of more stones than one in his bladder was manifested by means of the sound. On Dec. 1st, Mr. Firth performed the median operation in the usual manner, and removed ten calculi; they were of a light-brown color, and very fragile; many of them broke down in the bladder as soon as they were seized by the forceps; they weighed three drachms. Up to the fourth day about one-half of his urine flowed through the wound. After that period it came wholly through the urethra. A day or two later symptoms of severe constitutional irritation set in, and the whole of his urine passed through the wound. It was long before these symptoms yielded to treatment. They could not be referred to disease of any organ, and although he had several rigors, no collection of matter, not even in the prostate gland, could be detected. However, in time, through the medium of judicious treatment, he began to improve, and steadily progressed towards recovery. On the 31st of December he left the hospital in the following condition:—Urine acid, normal in quality and quantity; on microscopal examination no casts were seen; uric acid crystals were abundant; appetite good; sleeps well; tongue clean; bowels regular; feet œdematous; wound healed.

Chloroform was administered to the whole of the preceding patients without an exception. No unpleasant symptom arose from the use of it in a single instance, either at the time of operation or subsequently.

Remarks.—From the establishment of the Norfolk and Norwich Hospital, in July, 1772, to the end of last year, being a period of eighty-seven years and a half, 863 cases of stone in the bladder were admitted within its walls, and the calculi removed by the following methods:—

Lateral operation	803	
Extracted by dilatation, (females ..	41	
Lithotrity	11	
Median operation	8	
	——	863

Of the 803 cases, 698 resulted in recovery, and 105 terminated fatally, giving a proportion of 1 in 7.647. Of the forty one females, 39 were cured, two died, the proportion being 1 in 20·5. One case ended fatally after the performance of the median operation. Taking the whole number, the recoveries were 755; the deaths, 108; the proportion 1 in 7·99. The males numbered 822; the females 41, or 1 in 20.

Of late years the average of success has been high. From June, 1853, to December, 1859, a period of six years and a half, 69 patients were operated on; 4 died, the rest recovered, the proportion being 1 in 17·25. If 9 lithotrities and 3 females be omitted, there remain 57 on whom the lateral and median operations were performed, and as the deaths are 4, the result is 1 in 14·25.

It is a singular fact, that in two distinct periods during the existence of the institution, have 40 cases of stone been operated on successively without a death. The first instance occurred to Mr. Martineau; the second happened in a succession of cases, as they occurred to the surgeons of the day, Messrs. Dalrymple, Crosse, and Norgate.

The number of calculi which have been removed by operation at this hospital, amounted to 982 specimens, which have been carefully collected, and preserved in the museum of the institution. They form the largest collection in the world of human urinary calculi, exclusively the produce of a single establishment, and are arranged in numerical and chronological order, with an inscription to each, distinguishing the name of the operator, the name and age of the patient, the weight of the calculus removed, the day and year of the operation, and the date of the patient's discharge as cured, or of his death when the result was unfavorable. A section has also been made of every calculus when such was practicable. To this fine collection may be added 542 other specimens of calculi presented to the museum of the hospital by different surgeons.

TAUNTON AND SOMERSET HOSPITAL.

STONE IN THE BLADDER; LITHOTOMY; RECOVERY.

(Under the care of Mr. Cornish.)

The following is the only cases of calculus admitted since the above hospital was opened, fifty-one years ago, with the exception of a female, admitted in 1859, under the care of Mr. Alford, who removed a stone by dilatation and incision of the urethra.

Frederick P——, aged seven years, from the Yeovil

Union, was admitted Dec. 31st, 1859. No history of the case was given, but the nurse stated that he frequently passed urine during the night. He appeared in pain; had prolapsus ani; bowels moved when voiding urine. He was exceedingly timid. On sounding him, a small stone was felt, giving a rough, grating sensation. He was ordered milk diet, and a warm bath three times a week. A short time after admission he had an attack of influenza with cough.

Feb. 23rd.—A dose of castor oil having been administered the previous night, the lateral operation was performed, chloroform being used. The calculus (lithic acid) broke under the pressure of the forceps, but a solid piece, weighing when dry twenty-five grains, was extracted. The pieces broken appeared to consist of an external coating or layer. Hæmorrhage about two ounces. To have milk diet and diluents.

24th.—Ten A.M.: The patient had slept two or three hours; some fulness of abdomen; urine passed by wound; tongue foul; great thirst; pulse 100; countenance pallid and anxious.—Seven P.M.: Abdomen tympanitic; restless; countenance flushed and anxious; respiration quick; pulse 130; slight delirium; great thirst. The bowels had been moved, the wound looked well, and urine passed by it. Ordered, three leeches on the abdomen; afterwards, fomentations of warm water. To take two grains of compound ipecacuanha powder, and one grain of calomel, every four hours.—Eleven P.M.: The leech-bites bled freely; symptoms not relieved. To apply turpentine stupes over the abdomen.

25th.—Ten A.M.: Had slept three or four hours; abdomen less tympanitic; pulse 120; respiration better; countenance still anxious, but less flushed. To continue the powders and the turpentine stupes.—Seven P.M.: Abdomen much less distended; countenance tranquil; said he had but little pain; thirst less; tongue cleaning at the edges; pulse 100. To take one grain of compound ipecacuanha powder, and half a grain of calomel, every four hours; to discontinue the turpentine stupes; and to apply a warm cataplasm of linseed meal and bread over the abdomen.

26th.—Ten A.M.; The patient is in every respect better; slight ptyalism; pulse 90. To omit the powders.—Eight P.M.: The bowels moved three times. To take chalk mixture.

27th.—Ten A. M.: Bowels quiet.

He continued to improve, with the exception of tendency to diarrhœa (which was checked by taking three grains of compound ipecacuanha powder every night), up to March 9th, when he passed urine by the urethra.

March 14th.—He had severe pain in voiding urine, which was ropy, and contained lithates. To take dilute nitric acid in infusion of diosma, lemonade, and oranges.

21st.—Much better; wound healed.

29th.—Had phymosis. Ordered, fomentations of warm water, which relieved it.

April 7th.—Quite recovered.

From the day of admission to his convalescence the greatest difficulty was experienced in examining him, owing to his extreme timidity and sensitiveness.

LITERATURE FOR LUNATICS.—A superintendent of a county lunatic asylum, in returning thanks for a parcel of books and papers which have been forwarded to him for the use of the lunatics, describes the great value and interest of such a gift. Surely old books and newspapers could hardly have a more useful destination.

Medical Societies.

SEPTEMBER—OCTOBER.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

F. C. SKEY, F.R.S., President.

CASE OF ANÆSTHESIA OF ALMOST THE ENTIRE SURFACE OF THE BODY, AS WELL AS OF PARTIAL LOSS OF POWER, RECURRING SEVERAL TIMES, AND TRACEABLE TO THE EFFECTS OF EFFUSED PRODUCTS WITHIN THE SPINAL CANAL UPON THE VARIOUS SPINAL NERVES.

BY J. W. OGLE, M.D.,
Assistant-Physician to St. George's Hospital.

THE case was that of a stonemason, aged thirty-two years, of intemperate habits, who rather suddenly lost the use of all his limbs to a certain degree, as well as sensation of the skin almost entirely. The affection began with feelings of "pins and needles" in the legs. There was no affection of the mental functions. Under treatment for eight or nine months, and the use of frequent blisters to the back, he became perfectly well; but since then for five or six years, he has had a slight return of his illness every winter, which however did not prevent his working. He was admitted into St. George's Hospital with very diminished sensation of the skin of both legs as high as the thighs, as also of both arms up to the elbows, and of both cheeks and nose. There was no want of sensation in the skin of the forehead. The patient could walk, but in a very tottering manner; and the arms were much wanting in power. No pain complained of. Under the use of blistering the spine, and diuretics, chiefly the tincture of cantharides, he became in every way much improved, and was dismissed from the hospital greatly relieved. He subsequently returned, stating that he had lost power in the limbs, and had been affected by numbness of the skin of the upper extremities. He complained of occasional pain in the head. He was again treated with the tincture of cantharides, and also with strychnine and bark. He was a second time dismissed without any numbness, and was able to work. Six months later he was again brought into St. George's Hospital in a very heavy and stupefied condition, and with twitching of most of the muscles of the body. In this condition it was difficult to make out to what degree the sensation of the skin was affected, but it did not appear to be very much interfered with. The special senses were in a natural state; but the patient rambled when made to talk. He was cupped and purged. He became delirious, secreting objects under the bed-clothes. The pupils of both eyes were very contracted; and the trembling of the muscles became excessive. After a short time he became very irritable, and very angry if the skin of the limbs was at all pinched, as if their sensation was exalted. He was seized with or by a convulsive attack and dyspnœa, and died rather suddenly.

Post-mortem examination.—It was found that the spinal membranes had been the seat of extensive effusion of "lymph," or albumino-fibrinous material. This had in many places accumulated around the roots of the spinal nerves, and was evidently chiefly of old standing. In some places the roots of the nerves were thickly and firmly bound by this material, and this it was no doubt which had given rise to the interference with the motion and sensation of the limbs and face. Moreover, a good deal of soft, yellowish, fibrinous material was met with at the base of the brain, occupying the subarachnoidean tissues, and surrounding the vessels and nerves there met with.

Dr. Ogle has had a colored drawing made showing the presence of the effused material in contact with the spinal nerves, and also showing the microscopical appearance both of the spinal nerves and of the adventitious surrounding material.

CASES OF OBSTRUCTION OF THE VEINS OF THE LOWER EXTREMITIES, CAUSING ŒDEMA OF THE CORRESPONDING LIMB, OCCURRING IN PHTHISICAL PATIENTS.

BY GEORGE CURSHAM, M.D.,

Physician to the Brompton Hospital for Consumption and Diseases of the Chest.

THE author relates four cases of the above description, all of which occurred in patients in an advanced stage of phthisis. In three the œdema was confined to one limb, the corresponding veins being found closed with coagula. In one case both limbs were affected, and in this the lower part of the vena cava (as well as both femoral veins) were obstructed. He refers to similar facts published by different authors, and observes that the cases he has recorded correspond closely with those described under the name of phlegmasia dolens. The author, however, is disposed to think they had some other origin than the one to which that disease has been attributed, and states his reasons for considering them as coming under the class of cases in which coagulation in the veins is produced by the presence of pus or some foreign matter in the blood, and that the subsequent inflammation was owing to the stagnation of the vitiated blood in the vessels.

INQUIRY INTO THE TREATMENT OF CONGENITAL IMPERFECTIONS OF THE RECTUM BY OPERATION, FOUNDED ON AN ANALYSIS OF 100 CASES, NINE OF WHICH OCCURRED IN THE PRACTICE OF THE AUTHOR.

BY T. B. CURLING, ESQ., F.R.S.

Surgeon to the London Hospital, and Examiner in Surgery to the University of London.

WITH the view of ascertaining and estimating the results of the operations which have been resorted to in the different forms of congenital imperfections of the rectum, either for the preservation of life or its future comfort, and of assisting to establish the best modes of proceeding in these cases, the author has collected and tabulated 100 cases in which operations have been performed by himself and other surgeons. Of these cases, 68 were males, and 32 females. He classes the congenital malformations of the rectum as follows:—

1. *Imperforate anus, the rectum being partially or wholly deficient.*—Of this form the table furnishes 26 instances: 21 males, and 5 females.

2. *Anus opening into a cul-de-sac, the rectum being partially or wholly deficient.*—Of this the table includes 31 cases: 17 males, and 14 females.

3. *Imperforate anus in the male, the rectum being partially or wholly deficient, and communicating with the urethra or neck of the bladder.*—Of this the table contains 26 cases.

4.—*Imperforate anus in the female, the rectum being partially deficient, and communicating with the vagina.* Of this the table furnishes 11 cases.

Imperforate anus, the rectum being partially deficient, and opening externally, in an abnormal situation, by a narrow outlet.—Of this form the table contains 6 cases.

A few other congenital deviations have been observed, but they are of very rare occurrence; and the five forms enumerated above are alone included in the table. The author briefly relates a case of fæcal fistula, passing from the back of the sacrum to the rectum, which fell under his own observation.

After briefly reviewing the causes of these malformations, and showing that, though in most instances consequent on an arrest of development, they sometimes result from a pathological change, due probably to inflammation occurring during intra-uterine life, the author notices the relations of the peritoneum to the bowel in the different forms of atresia, as having an important bearing on the operations performed in the perineal region, and states that in several instances in the table the fatal result was due to the opening made in the serous sac. He also calls attention to an imperfect development of the pelvis in those cases in which the rectum is wholly deficient.

1. The 26 cases in the table of the first form furnish the following results:—In 14 cases, the gut was opened in the anal region, and in 12 the operator failed to reach it; of the former, 9 ended fatally, and 5 proved successful; of the 12 cases in which the gut was not reached, 2 ended fatally without anything further being done; in 7, colotomy was performed in the groin—1 only proved fatal; in 3, the colon was opened in the lumbar region—1 recovered, and 2 died. The author gives some particulars of the 5 successful cases, and notices that there is only 1 of complete success in which the rectum was wholly wanting. In 3 of the cases in which the bowel was simply incised, more or less difficulty was experienced afterwards in maintaining a free passage for the fæces; but, in 2 of the cases, subsequent contraction was prevented by drawing the bowel down to the anal region.

2. In 16 of the 31 cases of the second form, the gut was reached and opened. In 11 the operator failed in finding it. Of the former, 6 were fatal, and 10 recovered. Of the 11 cases in which the gut was not reached, 6 ended fatally without any further operation. In 2, colotomy was performed in the

groin with a fatal result. In 3 instances the colon was opened in the loin; 2 were fatal, and 1 recovered. In 4 cases, colotomy was performed without any previous subpubic operation, three times in the groin with successful results, and once in the loin with a fatal termination. In analyzing the ten cases of success after a subpubic operation, the author shows that in several cases in which the septum was slight the passage was readily established; that in others, where a space of some extent intervened between the two ends of the bowel, great difficulty was experienced in preventing contraction, unless the bowel was drawn down and attached to the skin; and he gives the particulars of a case treated by himself in this way with complete success.

3. The author adduces some cases of the third form, in which, the communication between the rectum and urethra being more free than usual, life has been preserved for many months, the fæces escaping entirely by the urethra, until the passage becoming at length blocked up, death has ensued. Of the 26 cases in the table, the gut was reached in 15; in 9, the operator failed to find it. Of the former, 9 recovered and 6 proved fatal. Of the nine cases in which the gut was not reached, 7 ended fatally without any further operation. In 1 colotomy was performed in the groin, in the other in the loin; both ended fatally. In two cases no attempt was made to reach the bowel from the perinæum, but the colon was opened in the loin. One did well, the other died. In 7 of the successful cases treated by incision, more or less difficulty was experienced afterwards in maintaining the passage. In the only case in which the bowel was drawn down and secured to the skin, no contraction took place, and the boy was well and thriving at five years of age. After the establishment of a passage at the anus, the escape of fæces by the urethra did not always cease, and several instances are given in which serious inconveniences resulted from non-closure of the abnormal communication.

4. The author, after alluding to instances of persons born with imperforate anus, the rectum opening into the vagina, who have passed through life submitting to the annoyances consequent upon it, states that the recto-vaginal communication is not always sufficient, and that obstinate constipation sometimes ensues. As the rectum descends low in the pelvis in this form, the operator cannot well fail to reach the bowel. In all the 11 instances in the table the gut was opened, and only 1 ended fatally, from overdistension of the rectum, consequent on the operation having been delayed too long. 8 of the 10 remaining cases are reported as successful, and 2 as unsucessful, owing to the tendency to contraction and neglect by the patients of the means recommended to maintain the passage. In one of the successful cases the bowel was drawn down and secured to the skin. The author gives the particulars of two cases which came under his own notice—one successful, the other unsuccessful. In this malformation the establishment of a new passage at the natural site is not all that is required. We have also to obtain the closure of the abnormal communication with the vagina. A case in which this opening is reported to have closed spontaneously is the only one of complete success in the table. The author is unacquainted with a single case in which, after the formation of an artificial anus, a successful operation has been performed for the closure of the recto-viginal aperture.

5. Of the fifth form there are 6 cases in the table —4 males and 2 females. In the males, the abnormal outlet was in the perinæum, just behind the scrotum, in 2; in 1, in the scrotal raphé; and in 1, anterior to the scrotum. In the females, the opening was in the perinæum, close to the vagina, or at the posterior commissure of the vulva: In all the cases the vent was insufficient, and the defecation more or less difficult. In this form, as in the last, the rectum can be easily reached, and it was opened in all 6 cases. The different operations have been practised to remedy this imperfection: 1, the enlargement of the original outlet, which was done in two instances; and 2, the establishment of a new anus at the natural site, which was performed in four other cases. The author, after giving a detailed account of one of the cases in which he had recourse to the latter operation, contrasts the advantages of the two methods.

In cases of imperforate anus in which a passage is successfully established, the retentive functions of the bowel generally exist in sufficient force. Satisfactory evidence on this point is furnished by several of the cases in the table, and the existence of an external sphincter has been frequently recognised in dissection.

The author, after noticing that in cases of imperforation unremedied by operation death is sometimes caused by extreme distension and rupture of the colon or the terminal pouch, remarks that the most common causes of death after the operation are peritonitis and diffuse inflammation of the areolar tissue. The former is generally produced by a wound of the serous membrane, the latter by the passage of fæcal matter through the tissues of the pelvis, both being due to the faulty methods of operating. He condemns the use of a trocar as a most unsafe instrument, and advocates the plan of drawing down the bowel and attaching it by sutures to the margins of the wound in the skin—an operation first performed by Amussat in 1835, and since described and recommended by Dieffenbach. The important advantage obtained by it is the securing a lining of mucous membrane for the passage traversed by the fæces. By this means we guard not only against the tendency to contraction, with its consequent miseries and dangers, but also avoid the early risks of inflammation and fæcal absorption.

In some instances troubles in defecation have continued after a sufficient passage for the fæces has been fully established, owing to the organic change in the bowel, consequent upon an obstruction of long continuance, subsisting after removal of the cause. The author gives an account of some dissections in which the muscular coat of the rectum was found remarkably hypertrophied and its mucous follicles enlarged, and states that when the vent for the fæces has long remained insufficient, and the bowel has undergone these changes, its expulsive functions become seriously impaired and weakened, and the infant consequently suffers in the same way as adults laboring under stricture of the rectum.

Having investigated the results of the operations performed in the perinæum, the author proceeds to inquire into the degree of success which has followed the operations for opening the colon in the groin and in the loin, to ascertain the inconveniences consequent upon an anus in these regions, and to estimate the comparative value of the two operations. Colotomy was performed in 21 of the cases in the table—in 14 by the inguinal operation, and in 7 by the lumbar. In 9 of the former an unsuccessful attempt had been made to reach the gut from the perinæum—4 proved fatal, and 5 recovered. Of 5 cases in which no previous operation had been performed, 1 only proved fatal, and 4 recovered. Of the 9 recoveries after inguinal colotomy, 1 survived only a month, 2 died of cholera within fourteen months, and a fourth was doing well at seventeen months; a fifth survived three years, and a sixth was doing well at thirteen years of age. M. Rochard has recently given an authentic report of the remaining three: 1 died at the age of forty-three; the 2 others are alive and well—1 at forty-six years of age, the other at forty-three. Of the 7 cases in which colotomy was performed in the left loin, attempts had previously been made to open the bowel from the perinæum in 5, of which 3 were fatal. In another fatal case an attempt was made after the lumbar operation. The author relates the particulars of a case operated on by himself, in which death was caused by injuries inflicted in the perineal operation before the infant came under his care. Of the 2 recoveries after lumbar colotomy, 1 infant lived to the age of seven years, and of the other there was no report more recent than seven weeks, and the child is supposed not to have long survived.

The author considers the two operations in reference chiefly to three questions—the difficulties of the operation, its dangers, and the condition and convenience of the artificial anus. The operation is admitted to be one of greater difficulty in the loin than in the groin; and after remarking on some of the causes of this, the author notices the irregularities in the disposition of the colon, which render it impossible to open the bowel in the left loin without wounding the peritoneum, and which prevent the operator finding the colon in the left groin. The author practised both operations on the bodies of twenty infants, and in two he was unable to open the colon in the left groin, in consequence of the colon making a sharp curve and passing over to the right side before reaching the pelvis. In six subjects lumbar colotomy was impossible without opening the peritoneum, owing to the colon being attached by a distinct mesentery and being loose in the abdomen. This serious impediment once occurred to the author in performing lumbar colotomy in a case of imperforate anus. In respect to the dangers of the two operations, the results of the cases in the table are much in favor of colotomy in the groin. The author quotes the description given by Rochard of the condition of the anus in the groin in two patients, who had been operated on many years previously. Both were in good health, and suffered very little inconvenience. One had married and borne children. In all the patients observed by Rochard, prolapsus had taken place from the lower part of the bowel, but it was easily restrained. The author also gives a particular description of a case, which has recently come under his own notice, of an artificial anus in the loin of a boy eight years of age, born with an imperforate anus, the rectum opening into the urethra. The anus was sufficient, but fæces escaped occasionally into the lower part of the bowel, and caused difficulty in micturition. To obviate this difficulty, he had suggested the lodgment of a sponge-plug in the lower opening. The author sees very little to justify a preference for either operation on the ground of the position of the anus, but the greater difficulties and dangers of lumbar colotomy would induce him in future to select the inguinal operation.

The author controverts the views recently advanced by Huguier in favor of the performance of colotomy in the right groin in preference to the left, and shows by several examinations of the infant subjects that the passage of the colon from the left iliac fossa to the right fossa is not so constant as he states.

The author, in conclusion, gives particular directions for conducting the operative treatment of imperfections of the rectum based on the results of this inquiry.

Reviews and Notices of Books.

The Medical History of the Treatment of Diseases of the Teeth and the adjacent Structures. By Benjamin Ward Richardson, M.A., M.D., &c. London: Baillière.

These are lectures delivered before the members of the College of Dentists, of which we have occasionally taken notice during the course of their progress. They do not treat "on those special subjects which constitute what may be called the direct science of dentistry," but follow an intimation "that subjects of a collateral kind would be acceptable to the members, and that a physician, speaking to them as a physician, and taking a physician's view of dental diseases, would be heard with satisfaction." The author is very complimentary to his auditors, describing them as "one-half of the science-world," while the medical profession stand for the other half; and he proposes to let them know what we, their "brothers in science," think on the matter of dental diseases and their treatment. In this phraseology and mode of address we see something more than the ordinary and allowable compliments which the lecturer pays to his audience. But an able and enthusiastic teacher creates occasions for the display of his powers.

The lectures on the Hæmorrhagic Diathesis, on Neuralgia, and Hysteria in relation to the teeth, are interesting and philosophical disquisitions, in which the scientific medical element greatly predominates. What is practical in them we may put in a nutshell. For hæmorrhage Dr. Richardson recommends a good styptic—nitric acid: a good plug—the extracted tooth, if at hand and the fang unbroken, or lint packed in layer by layer and saturated with the styptic; effective pressure, best made by an instrument of Dr. Reid; and the internal administration of the mineral acids or of lead. In neuralgia, if of miasmatic origin, quinine and carbonate of iron: if of central origin, "there is nothing in nine cases out of ten which can be done," and in these cases general hygiene and narcotics are offered as the only resource; if of purely local origin, belladonna applications, general opiates, and attention to the digestion, are the most important measures. Galvanism is spoken of doubtfully: we can advance it in these cases to the first place in the therapeutic list. Hysterical toothache yields to chloroform and hydrocyanic acid on cotton wool, or to counter-irritants—"mustard or galvanism," says Dr. Richardson, "between which there is so close a relationship." But "the great art of the practitioner in these cases lies in making them out at first, and in setting them free from serious interference afterwards;" or, in other words, skilfully diagnosing them, and then letting them alone. But the basic treatment of hysteric affections should be directed to the removal of the constitutional derangements which construct the diathesis. Here Dr. Richardson lays great—shall we say, overmuch—stress on the general hygienic rules which he believes to be all-powerful in medicine:—

> "There are some general rules which everyone can understand, which often effect more than physic, and without which all physic is of little avail. These rules are hygienic, and as such are necessarily simple. The first item in the prescription is, pure air; the second, exercise of body; the third, mental rest, if mind is overdone; the fourth, a diet of rigid simplicity; the fifth, cleanliness; and the sixth, regularity in times of action and sleep. What! say you; a panacea these for all the evils flesh is heir to, and Physic and Dentistry going into solemn procession to their own burial? Even so! But the risk is little of burials; not because the rules are bad, but because the general practice of the rules is too remote in the future to affect the present generation in the least."

The remaining chapters deal with diseases of infancy as influencing dentition; purulent and malignant affections of the masticatory organs; effects of mineral and other poisons, of diet, and modes of life; and the pathological and general history of necrosis, exostosis, and caries. Of all the sections, the fullest and most important is that dealing with chloroform and the narcotic remedial series, a subject on which the author speaks with the authority of prolonged experience and thoughtful investigation.

There is one aspect of this book which requires attention. The advocates of the Dental College have lately laid great stress on the probable injury to medical practitioners which would result from the new examinations in dentistry instituted by the College of Surgeons of England, alleging that the new candidates will be possessed of information which will enable them to prescribe medically in cases not requiring operative interference. The profession have not shown the alarm at this prospect which was probably expected: but the suggestion comes with a peculiarly bad grace when it is accompanied by a series of lectures such as these, delivered by a distinguished physician, ably dealing with the medical aspects of the diseases of the mouth, tracing their constitutional relations, and discussing the merits of the salts of iron and quinine, and the indications for tonics, alteratives, and alkalies. These therapeutic instructions and medicinal formulæ are obtained by the Council of the College of Dentists for a class of persons who have no medical right or qualification whatever, and who would be as little justified in prescribing as any counter-chemist in the kingdom.

Reports in Operative Surgery. By **Richard G. H. Butcher**, M.R.I.A., Surgeon to Mercer's Hospital, &c. Fourth Series. With numerous Plates. Dublin: M'Glashan and Gill.

Mr. **Butcher** has again presented himself as the promoter of improved surgery, and in a well-written memoir details his own experience regarding many difficult but successfully performed operations on the upper jaw and lip. For several years the subject of removing benign, and even malignant, tumours of the jaw, has excited the deepest attention of most hospital surgeons. Many useful and interesting reports of cases, in which the knife and bone-pliers have been successfully employed in such operations have been published, yet we receive with pleasure the additional experience detailed by the practical surgeon of Mercer's Hospital.

The first part of the "Reports" contains the details of three cases, in which more or less of the upper jaw, involved in various kinds of disease, was successfully removed by means of the bone instruments and limited incisions recommended by Mr. Fergusson. In each instance, such incisions were amply sufficient to allow of the ablation of all disease, an unsightly scar was avoided, and (as shown by well-executed drawings,) little deformity was created. This limited incision of Mr. Fergusson is described in his work on "Practical Surgery," and consists in cutting through the lip immediately in the mesial line, in the hollow under the columna, and elevating the nostril of the affected side from its relation with the bone, without in any way slittihg open the cheek. Although such a procedure frequently enables the surgeon to remove a tumour of considerable dimensions, still it is advisable sometimes to modify this kind of incision, and to carry the knife along the outer side of the nose, in the groove which naturally exists between that organ and the cheek, as high as the inner margin of the lower eyelid, and by means of a horizontal cut along the border of the bony parts forming the orbital socket, form a flap of almost the entire cheek. This affords a clear view of the whole jaw, and thus offers great facility for operative measures; while, if due care be taken in the readjustment of the soft parts, little or no deformity, or scar, remains.

In operations about the jaws, Mr. Butcher objects to the administration of chloroform, and advises that the patient be seated in an upright position. We are somewhat surprised to find so conservative a surgeon advocate the non-inhalation of an anæsthetic agent; for our experience goes to prove that the unconsciousness of the patient, instead of being a disadvantage, is a great gain, both to the unfortunate sufferer and the operator. Although the patient be unconscious, there is comparatively slight risk of the blood which escapes into the throat flowing into the windpipe, if the head be kept in a proper position, and much pain and sickness are prevented.

The various and numerous cases in which the author has rectified the deformity of hare-lip are well worthy the attention and study of all operators. His results are most gratifying, and, in more than one instance, the success has been beyond anticipation.

Mr. Butcher has given us an excellent compilation from a large experience, and although in some points we dissent from him, still we willingly accord to him that praise which he so well merits.

The Madras Quarterly Journal of Medical Science in all its Branches: including Original Essays, Reviews, Reports, and Medical Intelligence. No. I. July, 1860. Madras: Gantz Brothers. London: Bohn.

We have here a new caterer for public information and an aspirant for professional support. Each of the three Presidencies of India has now its first-class journal—viz., Calcutta, the *Indian Annals;* Bombay, the *Transactions;* and at length comes Madras with its new *Quarterly.* We wish them all success, but we fear it may turn out rather a hard struggle for the proprietors of each of these journals to make their venture good as a *commercial* undertaking. We should be sorry if such should be truly the case, for we think that whilst three serials may not each "pay the piper," one might. It is true that the *Transactions* belongs to the Medical and Physical Society of Bombay, but still societies do not like to be losers any more than private individuals. Our own special leaning is towards the *Indian Annals*, and we shall be very sorry if an imprudent competition should be the means of diminishing the prosperity of that admirable publication. Our new friend does not, we need scarcely say, agree with this view of the case, but "believes there is ample room for all."

"The prospects of local periodical literature have never been so bright as at the present time. India has never, prior to the mutinies, been occupied by so many European troops as are now likely to be permanently stationed in the country; and the field of observation and inquiry as to the influences of tropical climates on the European constitution is proportionately widened. The number of medical readers in India has increased considerably of late years. Men who enter the various branches of the medical service now-a-days find that they *must* read to keep themselves acquainted with the progress of medicine and the allied sciences, in order to be prepared for the examination, now compulsory, before promotion. We have heard a story told of an Indian surgeon of the old school, whose medical library, sold, with the other effects, after his decease, consisted of a 'Cooper's Dictionary' and an odd volume of The Lancet. It is not very many years ago that the regulations for the admission of assistant-surgeons into her Majesty's army contained a clause to the effect that candidates were required to produce before the examining board copies of certain standard books, *with their own names written on the title-page* as *bonâ-fide* proof of ownership. These times we are happy to think, have passed away for ever."—p. 167.

The editorial voice of the new journal, however, freely proclaims the fact, that medical periodicals in India must necessarily be more precarious as to their chances of existence than similar publications at home.

"So much do they rely upon individual exertions in a country where members of our profession are few and far between, that the success or failure of a journal may depend entirely upon the zeal and energy of one or two persons, who as a matter of course, are liable at any moment to be removed from the sphere of their undertaking by sickness or the call of duty."

Hence, according to the *Madras Quarterly*, the majority of Indian journals have been short-lived because their originators or promoters have been unable, from the circumstances above mentioned, personally to superintend the labors of the press, and not from want of support or deficiency of material.

The new journal contains four divisions. The first includes "Original Essays;" the second, "Reviews and notices of books;" the third, a "Medical Miscellany;" and the fourth, "Medical Intelligence." The last part contains a "Medical Dictionary for Southern India;" whilst the third division is accompanied by four illustrations relative to osteo-sarcoma of the jaw and elephantiasis of the scrotum. The general impression we have received from the perusal of our Indian contemporary is, that the journal is well edited.

Practical Swiss Guide; a complete Itinerary of Switzerland and the adjoining districts of Savoy, Piedmont, North Italy, &c. By An Englishman Abroad. Fifth Edition. Pp. 218, with Woodcuts and Map. London: Longmans.

If the rest of the "Guides" in this series which we have not seen are like the present, which we have well analyzed, we may honestly congratulate their compilers upon having accomplished an useful but arduous task uncommonly well. Whilst not pretending to rival Mr. Murray's excellent "Handbooks," so necessary to those who have plenty of leisure to see all that is to be seen, and learn all that is to be known, these "Guides" would appear to be specially adapted to the rapid traveller of this very "fast age." We have tried to think over some desirable piece of information, by the want of which we could test this Swiss Itinerary; but we have not been successful in finding it at fault. There is everything needful about passports, hotels, posts, steamers, agents, tariffs, and railways, to say nothing of sketches of routes, of scenery, and of other memorabilia, which will confront the Swiss tourist at every step. The traveller who is dissatisfied with this Guide, must have strange wants, or indeed be difficult to be pleased. We most cordially recommend it, and also that the tourist, as soon as he provides himself with it, should request the binder to put it in a flexible or limp leather cover, in lieu of the one it is published in. This, as the book now lies before us, appears to be its only desideratum.

Original Contributions to the Practice of Conservative Surgery. By J. G. Beaney, M.R.C.S.E. Melbourne: G. Robertson.

This is an interesting book, inasmuch as it is stated to be the first medical work produced in the Australian colony. Mr. Beaney justly observes, that the field of private practice is in itself considerable; and that when, in addition to this, there is such an institution as the Melbourne Hospital, which shall confer on the bulk of the profession that knowledge attainable by well-directed observation within its walls, it is not too much to expect that the colony will yet contribute many bright pages to the history of the medical art.

The cases upon which Mr. Beaney founds his book are very favorable examples of advanced conservative surgery, skilfully and successfully applied. We have first a case of scrofulous disease of the hip-joint, in which the limb and life were endangered, and saved by resection, performed notwithstanding an opinion of "advanced tuberculization of the lungs" had been given, which the author believed, and the result proved, to be erroneous. The second case is one of chronic hydrarthrosis, or dropsy of the knee-joint, in which, after the routine remedies of iodine, bandaging, blistering, &c., had failed, and there was reason to despair of cure, Mr. Beaney boldly tapped the joint, withdrawing ten ounces of a fluid which gelatinized on cooling, injected the cavity with three drachms of tincture of iodine (P.L.), diluted with an equal proportion of water, and "well manipulated the limb, so as to bring the iodine in contact with every portion of the sac." This bold treatment was completely successful.

We have read this work with feelings of great satisfaction, and hope it is not the last that we shall receive from Mr. Beaney.

On the Benefits likely to Accrue from the Formation of an Agricultural Museum in London. By Edwards Crisp, M.D. Pamphlet.

There is not an institution in this metropolis unless of a very limited kind, where a student can obtain useful information upon the science of agriculture and its collateral branches. In the present pamphlet, the author clearly shows that the establishment of an Agricultural Museum in London is an object of great national importance. A general outline of the proposed Museum is given, which would not, it is believed, in any way interfere with the Agricultural Society's annual exhibition of live animals and implements. Whether the proposed scheme will ever be carried out is a question which remains to be decided. The author, at any rate, is entitled to the thanks of all lovers of science for his efforts in bringing the subject under the notice of the public.

Zur Lehre vom Herzen. Gratulationschrift der Medicinisch-Chirurgischen Gessellschaft des Kantons Zürich an ihrem Fünfzigjährigen Stiftungsfeste den 7 Mai, 1860. Uberreicht von Dr. Hans Locher, Spital arzt am Thurgauschen Kantonspitale zu Münsterlingen. s. 132. Erlangen.

Contributions towards the History of our Knowledge of Diseases of the Heart. An address delivered before the Medico-Chirurgical Society of Zürich upon the Fiftieth Anniversary of its Foundation. By Dr. Hans Locher, Physician to the Thurgau Hospital at Münsterlingen. Erlangen.

A good address, but with a scope scarcely indicated by its title. We looked for some original clinical observations of a practical character, and found, upon the contrary, an historical and critical review of the labors of some of the more eminent investigators in the field of cardiac pathology.

Editorial.

SPECIALISM AND GENERAL HOSPITALS.

On former occasions we have endeavored to analyze the circumstances which have led to the divorce of several diseases from the general body of medicine for the purpose of treatment in distinct establishments. We think it is sufficiently obvious that most of these circumstances are purely artificial and arbitrary. With the rarest possible exceptions, special hospitals have arisen either from erroneous ideas of contagion, as in the example of Fever hospitals; from mistaken moral doctrines, as in the case of Lock hospitals; from the great disproportion of the existing hospital accommodation to the numbers of sick to be relieved, and the chronicity of particular diseases, which tends to encumber the wards, to the exclusion of acute cases—hence the plea for hospitals for phthisis; from the former exclusiveness and tendency to corrupt monopoly in the government and staff of the general hospitals; from the spirit of speculation and enterprise—not always honest—in individuals, not always of the medical profession; from the comparative neglect of particular diseases by the physicians and surgeons of the general hospitals, thus leaving them to be contended for by unmitigated charlatans on the one hand, and by specialist practitioners on the other, as in the case of diseases of the ear and skin, and deformities; and from private speculation, pure and simple, without any excuse from charity or science.

Now a candid and liberal inquiry into all these circumstances will speedily dispel the belief, begotten of error, and nurtured by the habit of slothful acquiescence, that the vast majority of special institutions fulfil any useful purpose The most ardent disciple of Coptic medicine will hardly contend that the system of treating the limbs and organs of the human body as if they were not component parts of one whole, but independent entities, each refusing to be understood by the devotees of its neighbors, has ever led, either in ancient or modern times, to any solid advancement in medical knowledge. It may be true that in certain semi-civilized communities, as in India, some individuals, consecrating themselves exclusively to the restoration of nasal deficiencies, acquire a particular skill in the Tagliacotian operation, and that others become expert phlebotomists, just as, in this country, some persons acquire great dexterity in corn-cutting; but it will not be pretended that this minute mode of practice has yielded any scientific fruit, or added anything to the common stock of knowledge. The advantage begins and dies with the individual practitioner. The system is essentially selfish, barren, commercial, and degrading. It tends to the destruction of science, and the substitution of art in its stead. And if thus adverse to the interests of science, it is needless to show that it must be equally opposed to the principles of charity. The welfare of mankind is so intimately dependent upon the progress of science, that whatsoever obstructs that progress cannot fail to dry up or to impoverish the sources of those benefits that charity would dispense to the afflicted.

It is in vain, then, that our modern Copts, or divisive doctors, call upon Science and Charity, as the patronesses of their special medical temples. Neither goddess answers to an appeal which both know is only uttered in hypocrisy, and is simply meant to conciliate interest with Pluto.

It may be roundly affirmed that, in this country at least, any attempt to establish special schools, whose teaching shall be confined to subdivisions of Medicine or Surgery, will utterly fail. If we take the most prominent and favorable examples,—the Moorfields Ophthalmic Hospital, and the Lying-in-Hospitals,—we see but small encouragement in this direction. The first institution has, undoubtedly, rendered great service to surgery; but it has mainly been by giving concentrated facilities for scientific observation and operative dexterity to a few men, who at the same time took care not to neglect the cultivation of general surgery. As a means of instruction to the mass of students its utility has been limited indeed. The scheme of medical education and the geographical extent of the metropolis render it next to impossible for any considerable number of students to devote a sufficiently close attention to an ophthalmic hospital situated at a distance from the medical schools. On the other hand, this winnowing of a large proportion of the eye diseases from the great hospitals creates a positive difficulty to the dissemination of a knowledge of ophthalmic medicine by taking away the means of clinical instruction from those very places where alone students can profit by them.

We believe it is universally felt amongst those who are engaged in teaching and examining candidates for the medical profession that it is not desirable to multiply even Eye Infirmaries—the solitary exception admitted by Sir Benjamin Brodie. The argument that the abstraction of particular classes of diseases from the schools deprives the medical student of the opportunity of pursuing a complete and scientific course of instruction, applies not more to Eye Infirmaries than to other special institutions. It is an evil that strikes at the root of all sound and philosophical medicine. It is an evil so great that the founders of special hospitals in most cases deserve the severest censure of the profession and the public. There are, of course, exceptions to this rule, and the Hospital for Epileptics is one, and a splendid one. The case of the Lying-in hospitals is even weaker than that of the ophthalmic institutions. At one time, before their own fatal experience had condemned them, it might be imagined that parturient women ought to be treated in hospitals apart. But with the history of almost every Lying-in hospital in the world to inform us, we now know that the aggregation of lying-in women, so far from being sanctioned by charity, could only be stigmatized as an inhuman proceeding, did we not feel that the motives of the founders were benevolent. And, in a scientific point of view, they cannot be said to offer any special advantage but that of studying puerperal fever and other diseases which they create. In practice it has been found absolutely necessary to establish maternity charities in immediate connexion with our hospital schools for the purpose of clinical instruction in obstetrics, and this with the happiest result for the poor.

In like manner there has been of late years a growing tendency to reunite to the general hospitals those classes of disease which false theories of public convenience and other causes had been scattering abroad and consigning to specialism. This tendency it ought to be the earnest endeavor of us all to foster and to aid. The present demonstration against special hospitals—although the most universal and weighty expression of professional opinion ever uttered—will fail in its most important object unless it result in the practical assertion of the unity of medicine by the gathering together of its *disjuncta membra* in our great general hospitals. The diseases which exploded doctrines or the *laches* of hospital physicians and surgeons had expelled, such as fever, in all its varieties, eye diseases, syphilis, deformities, the diseases of women and children, must again be admitted. We believe, indeed, there is now no general hospital in London where fever cases are rejected. In the out-patients' department, at least, syphilis receives ample attention. In some hospitals there is an eye clinique. The surgeons no longer scorn to treat a contracted limb, and have discovered that there is no impenetrable mystery in the art of cutting the tendo-Achillis. A few beds, but a very inadequate number, are now assigned to female diseases. One hospital—a new one—has actually gone so far as to appoint an aural surgeon. And, prompted by the Privy Council, the great hospitals have quite recently opened vaccine departments, for the purpose of giving practical instruction in all that relates to vaccination. This last step we regard as peculiarly beneficial, because it has already had the effect of affording the pupils an opportunity, from which they had been hitherto debarred, of studying many of the diseases of infants. The vaccinating room must necessarily become an important clinique for pædiatrics, supplying a serious deficiency in the obstetric department.

All these are good signs. But there is still ample room for improvement. The increased standard of efficiency demanded from practitioners should weigh with other reasons in urging the governors of hospitals to second the efforts of their staff in rendering our schools of medicine perfect in all the materials for instruction. Together with the advancement of true science, with the diffusion of the blessings of real charity, will proceed the decline and fall of specialisms and quackery.

THE SCIENCE OF MURDER.

There are two points upon which men of determination must always be clear before they enter on their course. The one is, to be resolved upon what they are going to do; the other is, to be alive to the best method of performing it. It would seem, perhaps, that we are uttering a mere truism—a platitude—in saying this; but self-evident as the truth of our assertion may appear, one half of the world do not act up to it. The result is the constant failure of human projects, either from men not having formed a distinct idea of what they intend, on the one hand; or, on the other, from their mistaking the very best way of accomplishing their intention. It matters not whether the deed to be done be a good or a bad one; to be successfully worked out, it must participate in the harmonizing conditions of theory and practice. But with the most definite intention and the best knowledge the goal cannot always be attained. A man may desire a distinct end, and yet labor for it almost in vain from the means at his command being in the very nature of things imperfect. We see this every day in science—in Medicine particularly; and we equally find that a successful issue frequently results in the hands of those whom we should scarcely have suspected of being such consummate artists.

The public journals for the last two weeks have afforded, unfortunately, ample illustration of this in their registry of crime. It is not the most agreeable duty, it is true, to teach by laying bare the sinuosities of villany; but it is sometimes necessary to do so in order that science and sociology may enter upon new combinations for the purpose of defeating the ingenious casuistry of crime. The newspapers have recorded murder after murder, and some cases of a very diabolic kind. The perpetrators have all had a clear idea of what they meant to do, and adhered to it. To kill, and to slay remorselessly, was their "mission." They were not excited by sudden jealousy, hatred, or despair; their own welfare was not jeopardized. They had certain objections of apparent benefit to themselves to gain; and to reach them they were determined. In carrying out the villany of cutting short the thread of life they adopted different measures. And it is by the more or less successful character of these measures that other murderers will be impressed and taught. Knowledge has run to and fro upon the earth in these recent times; and it has been knowledge both for good and for evil. Even the language of the age is endeavored to be increased in comprehensiveness by infusing into it terms springing out of the gory soil of "a chamber of horrors." Have we not "to burke" and "burking?" and has not "garotting" become an adopted word? And now, behold! Thomas Winslow a few days ago was tried, at Liverpool, for what has been termed—and by the prisoner himself, in the first place—"Palmerizing" Anne James!

Thus it is we become so familiar with crime—such adepts in its different shades and phases—that we can have single terms to express a volume of horrible intentions. And when we come to think that the employment of these words, the recognition of their meaning in all their fulness and extent, stamp the conversation and the literature of that class least likely to be overawed by moral considerations, we almost shudder at the wide-spread knowledge which must exist amongst those least to be trusted with it of how best to destroy life with the least chance of being discovered. In these days of cheapening everything for the "million," the means of murdering have become popularized. The well-reported history of one case of poisoning forms but the rehearsal for the second; nay, the very processes employed for unravelling the mysteries of one tragedy are registered for the purposes of another! To take life by the administration of poison seems to be regarded by the murderer as the safest method of attaining his end. It is true, coarser and more palpable modes are yet had recourse to, but these, as times go, can be looked upon by the more scientific murderer but as cases of bungling. Youngman cut four throats, and the bodies of his victims were scarcely cold before he was tried and found guilty—so unmistakably guilty that his Counsel may be said to have been at a loss for a defence. But even coarseness in crime may sometimes puzzle at first by its very boldness; witness the "Road murder." With assassinations effected by physical violence our system of police can, in general, easily cope; its quickness, sagacity, and universal reach make detection and conviction in such cases nearly a certainty. But about the cases of Palmer, Dove, the recent Liverpool case, and others unnecessary to particularize, there must seem to the prospective villain a roundness and finish quite captivating. Not only does their *method* appear to be the best, but the *result* in the majority of cases must be equally alluring. To be able to kill your victim unsuspectingly, and without any vulgar hubbub, must seem most desirable; but to be able to add to this a fair chance either of not being detected, or of not being convicted if accused, must render the art of poisoning a subject of careful study to the reading villain. This art has certainly in recent days attained what we must call a high development. This is seen not only in the selection and mode of administration of particular agents, but in the advantage which is taken of some natural illness to confound medicine by the difficulty of distinguishing between the two sets of symptoms produced. To such a pitch of refinement has this system of bewildering risen that science is beginning to stagger under its effects. On the one hand, it is powerless to hold where its grasp seems firm ; on the other hand, it would seize where it has next to nothing to take hold of. The Liverpool and the Yeovil cases which have just occurred fearfully illustrate this. In the first example, the administration of antimony by some person to Anne James, the drug having been found in the evacuations during life and in the body after death, would appear to admit of no doubt. Poisoning was suspected during life, and, we are of opinion, confirmed after death. But then, as in the Richmond case, the deceased was already laboring under a disease known to produce purging and vomiting. So Thomas Winslow was acquitted. In the Yeovil instance, the illness of Mrs. Peters, who was suffering from "intense irritation of the stomach and bowels, vomiting, and diarrhœa," gave rise to suspicions in the mind of the medical attendant that she was being poisoned. Some of her urine was accordingly sent to Bristol to be analyzed. Antimony is said to have been discovered in it by a well-known forensic chemist. Seven days afterwards Mrs. Peters died. The medical man asked for a post-mortem investigation; the husband objected to it; the Coroner was appealed to, and an inquiry was ordered. The result was that so large an amount of disease of the abdominal and thoracic organs was discovered, that the six medical men present unanimously agreed that it was unnecessary to open the skull. The intestines were sent to Bristol to be analyzed, and the chemist "could not detect the presence of antimony or of any other metallic or mineral irritant."

Here, then, in the first case, Science gave freedom to the man Winslow, who, after being acquitted of of the murder of Anne James, was obliged to escape by a side entrance lest he should be attacked by the mob. It was waiting for him, anticipating his fresh arraignment upon three other charges of poisoning. In the second instance, she tried to hold culpable the relatives and attendants of Mrs. Peters, against whom not any suspicion should have been allowed to rest. It has been urged that "the disagreements of doctors are the safety of the poisoner. Juries will not hang man on the opinion of a scientific man, when his opinion may be shown to be fallacious by a second professor. For the poisoner, then, the chances of escape are solid. Can a man be hanged for the crime of murder when it cannot be satisfactorily proved that his alleged victim was murdered? Here the duty of the jury is clear, even when the strongest testimony is in favor of the assumption that murder has been committed." If it be true, as doubtless it is, that, whatever may now appear, the art of destroying human life can never permanently outrun the sagacity for its protection, Science has again arrived at a point when she must gird up her loins for the fight of supremacy. Murderers and poisoners may have great ingenuity and much knowledge, but there is no reason why they should have more than other people; on the contrary, it will eventually be found that they have less than those whom a wise Providence will call into existence to frustrate their powers of darkness and infamy.

MEDICAL ASPECT OF THE LATE SESSION OF PARLIAMENT.

A SESSION of Parliament never yet ran its course without being regarded by certain "interests," as it is the custom to call them, as specially bound to legislate for their advantage. The paper interest must have the tax off paper, or the import duty raised, or everything will go wrong. This the brewer laughs at, and maintains it to be the duty upon hops which hangs so heavily on the land. The timber merchant declares his commercial brethren to be mistaken, the truth being, that mahogany and spruce fir must "come in" free, but the hops, paper, tea, and French wines may have *their* interests safely postponed, if not entirely neglected. If Parliament interferes with anything which *all* our commercial friends should see their interest in it is certainly that which may be comprehensively included under the term "public hygiene." The purity of food, the prevention of accidental and intentional poisoning, the removal of nuisances, the cessation of intramural interment, the proper carrying out of vaccination, the duty of the Coroner, &c., form subjects which whether a man be rich or poor, *millionaire* or petty huckster, most vitally affect him. If we must pay taxes, let us enjoy our existence whilst so doing, and even, say we, let us be a long while about it. This favor will be the more readily obtainable the more sedulously the Government legislates for the public health. It did *something* during the session just past; we wish, however, it had done more. Still we must be thankful for what we obtained. Let us glance at a few of the Parliamentary gifts.

Early in the session Mr. Scholefield obtained leave to bring in a Bill to prevent the Adulteration of Food and Drink. In Committee in the House of Lords an objection was taken to its first clause, which, in order to convict, made it necessary to prove that the article was adulterated to the knowledge of the seller. It was affirmed that it would be practically impossible to prove this knowledge. Take the case of milk, for example. It is not too much to say that the lives of many of the infant poor are sacrificed owing to the adulteration of the fluid in question. Now if the vendor be allowed to say, "Oh! "I know nothing about the adulteration ; I sell my milk as I bought it,' it will be next to impossible to bring home the charge of adulteration. But self-evident as this seems, the "Law Lords" opposed any alteration. Lord Wensleydale said, that as an article might be brought from the wholesale dealer, and sold without any fraudulent intention, it would hardly be right to convict; whilst the Lord Chanceller affirmed the "wholesome maxim of the law" to be, *actus non facit reum nisi mens sit rea*, and that it should not now be departed from. It must be held, he said, that proof of the *scienter* is essential to constitute a legal offence. Upon this principle an amendment was negatived, the clause was agreed to, and the Bill passed through Committee.

Sir W. Dunbar introduced a Bill to Regulate the Registration of Births, Deaths, and Marriages in Scotland; and Sir Fitzroy Kelly moved for some important information connected with the Cleansing of the Serpentine and other Public Works—*alias* nuisances. —The questions put to the House by Mr. Alderman Salomons, Mr. Warre, Lord C. Hamilton, and others, in reference to the misdoings on board the transport ships *Tasmania*, *Accrington*, &c., if not eliciting anything very important, were highly useful in drawing the attention of the Government to the scandalous occurrences which had so raised the general ire.—The Secretary of the Admiralty was interrogated as to whether the attention of the Board had been directed to the quality of the wine supplied to the Navy for medical purposes, it having been described as unfit for the use of invalids, although exempt from duty. He was also asked if he could give an assurance to the House that the drugs supplied to the service in question were not of an equally adulterated and deleterious kind. Lord C. Paget, in reply, stated that the drugs were supplied from the Apothecaries' Hall, from which we might infer their quality; and that, as regarded the wines, inquiry would be instituted into the matter.—The question was early mooted before the House, by Messrs. Clive and Griffiths in particular, as to the desirableness of prohibiting the removal in street cabs of persons attacked by infectious diseases; and some model conveyances for the sick were ordered for inspection. Lord Raynham wished regulations could be made for enforcing the detention at the hospitals of carriages used for the conveyance thither of sick persons until proper certificates had been given of their having undergone sufficient purification. Sir G. C. Lewis was forced to admit that by the existing Police Acts there was not any such power, and, therefore it was impossible that such directions could be given without further legislation. The subject, however, has not escaped the attention of the Police, as far as the present powers extend. The Police themselves have provided a carriage for the removal of any policeman laboring under an infectious malady, or of any person infected in a similar manner who might be in a lodging-house subject to the control of the Police. Anyone in parochial authority, or having any special interest in it, who may desire to see the carriages which are being provided for the Police, may receive admission upon application being made to Sir Richard Mayne.

On the motion of Mr. Deedes, the Secretary of War undertook that the consideration of the War-office should be given to the following grievance of certain medical officers:—A deduction of 8½*d*. per diem is made from the pay of the surgeon and the assistant-surgeon of a cavalry regiment for each horse kept by them for the public service, when the rate of pay of these officers is precisely the same as that of the medical officers of infantry regiments. Now, the latter (under the 21st par., Oct. 1858) are expressly exempted from any such deduction; for it is said they "shall not in future be subject to any stoppage out of their daily pay for any ration of hay, straw, or oats supplied for the horse or horses kept by them for the public services."

Sir J. Pakington came once more to the rescue of the assistant-surgeons of the Navy, when he asked the Secretary of the Admiralty if it was true that the assistant-surgeon of her Majesty's ship *Queen* had been refused a cabin at a time when four cabins were vacant, and whether any notice had been taken of it by the Board of Admiralty. Of course everybody was greatly surprised and extremely ignorant about the matter.

Colonel Dunne and Mr. O'Connell, spoke some good words for the militia surgeons. Mr. Sidney Herbert, however, stated that he had not yet been able to make any change in the position of these officers. In Ireland their case seemed even harder than it is here; for in the former, "head-quarters" were often in some insignificant place, where it was almost hopeless that any addition could be made to their emoluments by private practice. The Secretary promised that if in another year he could do anything to improve their condition he should be glad to make the attempt.

The sum of £2500 was voted for the expense of the inspection of burial-grounds, in order to their closure and the interdiction of interments within churches. £6010 were allotted for the salaries and expense of the offices in London under the Local Government Act in connexion with the late Board of Health.

Attempts were made by persons having great local interests in Southampton to get the House to do away with the condemnation which had been passed upon the site, &c., of Netley Hospital. Mr. S. Herbert, however, in spite of the report of the Committee, maintained that for restoring to health those who were suffering from tropical diseases, of which the majority of the inmates of the hospital in question would be composed, the Southampton site had not been judiciously chosen.

The County Coroners' Emancipation Act we shall notice on another occasion. With regard to the election of County Coroners, the measure is now in force.

An Act to Amend the Medical Act—the first of a series—has been passed. Its provisions are of limited application, and chiefly relate to points of internal organization of the Colleges of Physicians. A clause of some importance, intended to bar the swarm of new Edinburgh Licentiates from making use of their northern diplomas as a title of admission to the Membership of the London College, was struck out. The Act has been printed *in extenso* in our columns.

The Metropolitan Gas Act is a measure which has an important hygienic as well as commercial aspect. Provisions are made, by which the illuminating power and purity of the gas supplied by all London Companies will not be suffered to fall below a certain standard. The Vestries and District Boards are empowered to appoint skilled examiners, charged with the duty of testing the gas and reporting the results. Any consumer, upon paying a fee of half a guinea, may call upon the examiner to test the gas of the Company under his supervision. In addition to this safeguard to the consumer, against the adulteration of gas by deleterious matters, provisions are introduced, having for their object the prevention of injury to water-pipes and the water-supply from leakage of the mains. If these prove effectual,—and we do not think they are sufficiently stringent for the purpose,—a very serious source of empoisonment of the soil, and consequently of the air of the metropolis, will be got rid of.

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HOW TO SECURE OUR CROPS.

The cereal crops are of such paramount importance to the health of the people, that we feel it is not travelling beyond our province to make an excursion into the domain of the agriculturist. The excessive, long-continued, and widely-extended fall of rain naturally spread throughout all classes the most serious misgivings as to the safety of the grain upon which the nation depends for its next year's support. It is true that the alarm has been allayed by the favorable change in the weather. Still it is a question of exceeding interest—if not for this year, certainly for future years—to determine if in *wet* weather, with *ripe* crops on the ground, the farmer must see his grain rot or sprout, and remain in a state of utter helplessness. We cannot avoid an expression of astonishment that in England, the land of agricultural progress, where all the appliances of science seem to be called into action in order to improve the soil and to increase the yield and quality of the crops, so little should be done with the view of securing them when ripe for the harvest. Reaping and thrashing machines seem to constitute the ultimate efforts of agricultural ingenuity. But once cut, the corn has to remain in the fields until sufficiently dry to be housed or stacked. Wet weather in the midst of a corn harvest appears to afflict the whole agricultural community with a general paralysis. Nearly all productive labor appears to cease, and with ripe crops of corn on the land, labor in the fields is entirely suspended. The food of the community, and with it health and commercial prosperity, are lost or jeopardized, because it is concluded that sunshine can alone dry ears of wheat. Are we really reduced to this conclusion? Is the nineteenth century so deficient in mechanical science that it can produce nothing to relieve the expectant agriculturist from the melancholy task of listlessly staring at the barometer? Strange is it that it has never occurred to the Royal and other Agricultural Societies to offer prizes for some application of mechanic power to the saving of *ripe* crops of grain in *wet* weather.

The problem appears to be simple enough. The process of drying consists in evaporation. The object is to get rid of the excess of moisture in wet substances. If we assume that a field of ripe corn is dried by exposure to moderately dry air moving at a rate of twenty miles an hour during a week; when, owing to rainy weather, it is impossible to dry corn in the open air, we have only to subject it to an equal volume of comparatively dry air under cover. We cannot avert a fall of rain, but surely we can raise the wind. For drying timber and a multitude of other substances various machines are in use which can drive air with the velocity of a hurricane. It is an extraordinary fact, that the patent for the most powerful and effective of these desiccating machines—the admirable invention of Mr. Davison—has expired without one of them ever having been applied to agricultural purposes. By such machines the work that is commonly effected by exposure to the open air during weeks or months, could be, and is, completed with certainty in a few hours. In practice then, there is nothing more easy than concentrating, by art, into an hour or two, the natural drying power of a week. But there is no necessity for such rapid action. We have simply to submit the substances to be dried to a current of air accelerated or heated to the required degree. If the atmosphere contain a large proportion of moisture, then a greater velocity or subjection to the current for a longer time, will of course be necessary. In the months of August and September it can rarely happen that the natural air will be so far saturated as to be unfit for the purpose. But if saturated, then may the air be artificially dried or heated—conditions perfectly attainable, and involving only a trifling outlay.

We refer, again, to the artificial desiccation of wood, because it is an especially valuable illustration. Under the ordinary method, we know that timber cannot be effectually "seasoned" without free exposure to the air for many months. But an architect has recently stated in a discussion upon the method of preserving timber, that the wood used for the flooring of the Coal Exchange was taken in its natural state, and was thoroughly seasoned in less than ten days, by driving through it air heated to 110°, at the rate of forty-eight miles an hour. In some cases, from thirty to forty-eight per cent. of moisture was thus taken out of the wood. Although the flooring has been down ten years, no shrinkage can be found. If wood can be thus subjected to an artificial desiccating process, the difficulty of drying such substances as corn in the ear, or straw, cannot be great. Not only could corn be thus dried for preservation, but another important advantage might be obtained. It is not unusual in wet seasons to house wheat dry enough to keep, but still so soft as to be unfit for grinding until it has been stored for several months. Hence, if it be requisite to grind such new corn, it is found necessary to mix a greater or less proportion of old corn with it. This implies a deterioration in the value of the new corn. Now there can be no doubt that the artificial desiccation can be at one operation carried to the extent necessary to fit the corn for the mill. In fact, we can dry as little or as much as we please.

In the letter addressed by Mr. Wakely to the Editor of *The Times*, and copied into THE LANCET, it has been shown that there are various desiccating machines in use, adapted to a variety of materials. That corn and other alimentary substances should be allowed to rot because the sun and the wind will not at all times do just what we want, is a reproach, a discredit to our agriculturists. The time has gone by when "half a crop pays better than a whole one." Free trade has overthrown that once favorite notion. We are no longer compelled to limit our consumption to the amount which the country can produce, and to pay as much or more for half-rations as for full measure. It is now the interest of the home-farmer to bring as much corn into the market as he can. If he suffer half his crop to perish by rotting or by sprouting he cannot reckon upon such a rise in the value of the other half as will compensate him for his neglect or want of skill. The deficiency will be made up from abroad; and the foreign grower will pocket the money which the home grower has thrown away. The liberation of the corn-trade has thus a tendency to stimulate the farmers of all nations to produce the greatest quantity of food for the people. The application of science and mechanical power to the desiccation of alimentary substances, by facilitating this production, promises to be eminently profitable. On the farms of many enterprising agriculturists steam-engines for thrashing and other purposes already form a part of the stock of implements, and wherever these engines exist, the application of the requisite additional machinery for the drying and saving of *ripe* crops of grain in *wet* weather will neither be difficult nor expensive.

The preservation of mangold wurtzel, turnips, and potatoes, by artificial desiccation, as also proposed by Mr. Wakely, in the letter already quoted, is likely to be extensively practised, and must prove of great public value.

MILITARY ORGANIZATION AND CLAMORS FROM THE CAMPS.

CLASS prejudices and formalism are the curses of our public services, and when these are put into motion by the lever of personal conceit and fussiness, the result cannot fail of being often what some quaintly denominate "a pretty pickle." This we have now before us in the clamor from the camps, the voices of woe from Curragh, Aldershott, and Shorncliffe. There have been one or two persons, it is true, who have exclaimed against the vituperation that has been within the last week or ten days cast upon these military paradises. But whilst admitting that there may have been a slight exaggeration upon the part of some complainers, and a want of allowance for impossibilities upon the part of others, we cannot help believing that where there was so much smoke there must have been a little fire—in other words, that these camps, and especially Curragh, were agglomerations of mud, filth, and discomfort during the past rainy weather. At Aldershott there have been three regiments encamped under canvas throughout all its inclemency, forming as "South Kensington" tells us, "indeed a pitiable sight." From Curragh, however, have proceeded more doleful revelations; it has been asserted that the officers forming what is termed the campment "actually selected the very worst spot of ground;" that although they placed the camp upon an inclined plane, yet the horses were standing in mud and water; that some of the horses had been so wounded by the ropes to which they were attached in camp, that they were prevented from walking; and, said a French soldier, "though I have seen much camp duty, never have I witnessed one quarter the evils which we are told happened at Curragh." The real thing, however, in the opinion of a "Curragh Officer" "that was a distress to the dragoons and the artillery was the 'wear and tear' of their boots and overalls; and if the Government put horse soldiers under canvas, they ought to give the men some little compensation for the extra expense they are put to in boots and overalls. The walking about with horses and making the lines wear all the things out."

We can readily understand that the Curragh has been more flooded this season than it has been known to be before, and that though this has covered the men and horses all over with mud, and made the coats of the latter "stare," the mischief may be rather superficial than of a permanent kind. It has been stated that the per-centage of sick amongst the men has been extremely small. This may be true, and yet much unnecessary misery and discomfort may have been endured. Moreover, some of the defenders of the camp at Curragh have been obliged to admit, that things altogether—weather, bogs, and mud—had been so bad as to force Sir George Brown to send away the whole of the cavalry and artillery. Four squadrons of the Greys, four of the 3rd Dragoons, the 15th Hussars, and three batteries of Artillery, all left the Camp, not because it was too hot, but too wet to hold them. Upwards of 1200 horses were "standing in the open." Now it has been said that at the Camp at Chalons the weather has been much the same as with us; but we have not heard of such misfortunes as have occurred at Curragh. The truth is, as the "French Soldier" well pointed out, the fault to be found with the Camp in question is not in the fact of its being upon the particular locality, or exposed to the late extraordinary weather; it is in the few and wretched means at the command of the men to protect themselves against local peculiarities and climatic vicissitudes. Instead of letting the horses stand in a slough, why were not ditches cut to carry off the water? Instead of living in a bog, why were not the stones procured, which must have been at hand, to pave along the pickets of the cavalry and artillery? Why, in short, is it, that however brave, hardy, generous, and obedient the British soldier may be, in camp he can provide nothing for himself, and becomes almost helpless when once out of the routine of barrack life and ordinary regimental duty? The answer is, dunder-headed routinism cramps the soldier's energies and ingenuity. He dare not either think or act for himself amidst the mud of ten thousand Curraghs. In France each soldier really becomes a "domestic institution." With us he cannot move from red cloth and pipe-clay. Whether it be to chew unroasted coffee-berries, as in the Crimea, or to sleep in the mud at Curragh, do it he must. He must neither roast his berries, nor drain his tent. High authorities inform us that there are rules of the military service which utterly forbid the men carrying out any works except by the order, and under the inspection, of the proper officials. The *United Service Gazette* remarks that if there be a rent in a tent, a private might possibly escape blame if, during a storm of rain, he stuffed his great-coat into it. But it is much to be doubted whether he would be justified in shutting out the wind by papering over a broken pane of glass prior to the arrival of the official plumber and glazier. If even a commanding officer were to order his men, quartered in a low spot, to cut a trench to carry off the accumulating waters, it is more than probable he would be reprimanded, if not more severely punished, for thus acting without the orders of his general, and the assistance of the engineer department. We can scarcely wonder, then, that the men located at our camps can neither add to their comforts nor diminish their miseries. They are bound to accept and perpetuate every nuisance into which they are inducted "If" says the writer in the *United Service Gazette* of Sept. 1st, "the place be not drained (and Aldershott is a proof of the difficulties of Government drainage) when we march into it, it must remain as it is, though men plod all day through mud several inches deep, and horses stand up to their fetlocks in stagnant water." A pleasant and improving system truly! A system, too, so Medusa-like in its tentacles, that it overspreads and holds everything in the meshes of the most obstinate old fogeyism. In Britain soldiers are to be soaked into frogs because routinism forbids them to be the engineers of their own drainage, whilst within the tropics they are to be stewed into ragouts because routinism obliges them to dress there in summer as they do here in winter! From Malta comes a voice of lamentation also. "A. B. C." observes that.

> "At present the thermometer is 91 deg. all day and 88 deg. all night, and is 131 deg. in the sun at noon; yet is the soldier clad as in winter. I find it necessary to wear four shirts a day, and have my jacket and tunic when taken off hung in the sun to dry. What, then, must be the state of the soldier? The Horse Guards authorities could best form an opinion if a sentry could be suddenly removed from his post and planted before them; they would find the hapless man in clothes wringing wet, and the stench proceeding from them of the accumulated sweat of months perfectly sickening. To enter a barrack-room now requires a strong stomach, so obnoxious is the smell. Luckily for the men, they are so accustomed to it that they are unaware of the sty-like atmosphere in which they live. It is the foul clothes that produce this."

The same writer also informs us that "the medical men have spoken out this year on the subject, but they are treated with indifference, and the poor soldier must sweat on." Treated with indifference indeed! What, we should like to know, do commanding officers care for the opinion of him to whom the late Commander-in-chief in India applied in a general order the depreciating title—the vulgar barrack-room expression of "Regimental Doctor"! Before us is now lying a recent number of the *Indian Lancet*, in which an officer writes to say that, accidentally passing through a large station some short time since, he was disgusted to find that the medical officer's recommendation to have the men's clothes washed who had been attacked by *scabies* had not only been cavilled at, but positively countermanded by the senior officer! To those who are disposed just now to paint the condition and authority of the medical officer of the army in *couleur de rose*, we would recommend a careful perusal of the letter by "Machaon" in our last number. So far as the true position of the military medical officer can be shown in a general way, we believe that our correspondent's observations are to be fully relied upon. The medical department of the public services has, as "Machaon" shows, generally been overruled by a cold and narrow-minded policy, but that policy forms but a trifle to the jealousy which now scowls at the privileges the new Warrant ostensibly concedes to it. But whatever may be the faulty condition of the medical *régime* of the public services, there is no reason why the whole military organization of the country should be kept at a standstill. Every now and then some apparently gasping efforts are made at improvement under the vigorous lash of public opinion. But this soothed for the moment, class prejudices and routinism again hold sway. Our Administration may affect to sneer at the poor opinion which the chief European powers express as to our military system. They laud our soldiers and sailors individually, and regard them as some of the finest material out of which combatant men can be made; but as to the system which binds them together and wields them *en masse*, they scout the idea of it. They tell us plainly to our faces that we "are the Chinese of Europe":—

> "The next time I passed Mont Cenis was in the present year, surrounded by a mass of uniforms, French and Sardinian, and a cloud of smoke. The night was fine, the air, notwithstanding the season, mild, and I believe, but for the tobacco, would have been pure. On my left was a fine, intelligent French staff officer; on my right, an educated, shrewd Sardinian one; in the front, other French ones, rough, soldiery, and good-humored. Before my nationality was discovered, they discussed military organization. Our army passed under review. All agreed that the British soldier was a first-rate one; and it was even said that, owing to the superior education diffused throughout England, he was, individually, more intelligent than the French one; but as to military

organization! 'Fine soldiers,' said the Piedmontese, but without organization, and badly commanded.' 'Oh, the English,' replied a Frenchman, 'they are the Chinese of Europe. They were just the same in the Crimea as they had been at Waterloo; they have not advanced a step.' 'No wonder all went wrong with them,' said the Sardinian."—*Italy in Transition, By Wm. Arthur, A.M.*

Let the governing bodies look to it. The people of Britain are now receiving an education in military matters that they have scarcely had before. Men's eyes are being opened, and they will not continue calmly to submit to the taunt, that though as soldiers they may be as brave as lions and as enduring as mules, they are in other military matters as stupid as sheep and as obstinate as donkeys.

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REPORT OF THE COMMITTEE ON LUNATICS.

At length, after an incubation of three sessions, the Select Committee on Lunatics has hatched its Parliamentary Report. We are sorry to have to express our conviction that the chick has a very weakly appearance, and by no means corresponds with the time and trouble which have been devoted to its production. A Parliamentary Committee, containing three Home Secretaries, besides many other good men and true, might well have been expected to conclude its labors in some more satisfactory fashion than the production of a Report, which, if adopted as the basis of the promised legislation, will leave the visitation of lunatics considerably less provided for than it is at present. The main features in the history of this Committee are not a little curious. The germ of the whole affair was a quarrel between Admiral Saumarez and the Lunacy department of the Court of Chancery about the care and custody of a patient. The Admiral's quarrel was adopted and introduced into the House of Commons by the member for Bath. There, beyond all expectation, it developed into a large and wide inquiry, the concluding act of which is now presented to our consideration. Three sessions of work of an important Parliamentary Committee, reported in three blue-books, recording 6282 questions and answers, besides appendices, are to result, as it appears, in the suppression of the small medical offices now held by Dr. Hume and Dr. Southey, and the transference of the visitation of Chancery lunatics to the Board of Commissioners. Behold the *exiguus mus* of all this Parliamentary parturition! It would not be far from the truth to affirm that France has swallowed Savoy and Nice with less to say about it than has accompanied these preliminary steps towards the absorption of the Chancery medical visitors by their powerful neighbors in Whitehall-place. This main result of the inquiry, as we may call it, is moreover, a singular *non sequitur* upon the evidence, which strongly recommended the increase of official supervision as the most efficient method of securing the proper care and treatment of the insane. The case under its bare poles of logic will have something like the following aspect. The committee think—

1st. That sufficient guarantees for the care and treatment of the insane do not exist.

2nd. The Government supervision for the care and treatment of the insane, so far as medical men are concerned, is conducted by three Commissioners in Lunacy and two medical visitors of the Court of Chancery.

3rd. The Committee recommend that the two last-named offices be suppressed, and their duties transferred to the Commissioners in Lunacy, so that, instead of five medical officials, the increased duties of visitation will be discharged by three.

The assertion made by the Select Committee in their Report, that "the Chancery lunatics are visited less frequently than any other class of lunatics, whether in public or in private asylums—in fact, they are only visited once a year," expresses a misapprehension of fact, curiously enough indicating a foregone conclusion. The Chancery lunatics are, in truth, visited more frequently than any other class, inasmuch as all of them who are in public or private asylums are visited by the Chancery visitors in addition to the statutory visitation of the Commissioners and Visiting Justices. Those who are living as single patients "kept for profit" are liable to the same visitation; and it is only those of them who are living at their own homes who are visited by the Chancery visitors alone. These last, it is true, are only visited once a year; but if they were not Chancery lunatics they would not be visited at all, since the privacy of the English home has been hitherto guarded from the Commissioners with a care perhaps in this instance more jealous than beneficent. The Chancery lunatics, therefore, are visited more frequently than any other class to the full extent of all the visitations made under sanction of the Court.

From the above and other considerations, we fear that the opinion of the Committee in this part of their inquiry has been too much influenced by personal considerations. For instance, Mr. Tite, in his speech in the House in which he opened up the inquiry, referred to the great age of the Chancery visitors. But no question of principle, except that of retiring pensions, could really be involved in that matter. Only a few years since, judged by that standard, the Commissioners in Lunacy would themselves have made but a sorry figure. Boards, like men, have their periods of youthful vigor, mature strength, and decadence; and to legislate or to recommend legislation on the accident of an hour, however excusable in the strategy of party, ought not to occur in those departments of social science where the politician must cede the *pas* to the philosopher.

It is, however, but fair to say that this Report of the Select Committee appears to be very much like what toxopholite ladies call a *fluke*. Mr. Walpole, the Chairman of the Committee, presented to his colleagues a report embodying a really dashing scheme for total revolution of lunacy government, by means of the ten district inspectors, like the Government inspectors of mines or the Poor-law inspectors. Lord Shaftesbury, however, protested to the effect that this scheme would just tend to suppress the Commissioners themselves; and Dr. Bucknill, in his address as President of the Association of Officers of Asylums, argued that it would drive all respectable physicians out of the lunacy specialty; and so it was outvoted in Committee by men who had nothing to propose in its stead, but who, shielding themselves behind the shoulders of Lord Shaftesbury from their own responsibilities, left the brunt of future difficulties to him. Mr. Walpole proposes district inspectors to do the work of the Commissioners. Lord Shaftesbury, to avert the threatened invasion of his Board, maintains that it is equal to any amount of extra work; and the Committee, throwing over the scheme of their own Chairman, place the onus of the act on his Lordship's shoulders in the following paragraph:—

> "Your Committee cannot but feel some doubt whether it will be in the power of the Board, as at present constituted, efficiently to discharge the increased duties to be entrusted to it. But as they collect from the evidence of the Chairman that the Commissioners themselves are of opinion that they could do so without any permanent addition either to their number or their staff, your Committee have abstained from recommending, without proof of its necessity, that such addition should be made; and also from considering—as in that case it would have been right to do—in what manner any such addition could best be provided."

Medical Annotations.

ACADEMIC CHANGES AT ABERDEEN.

Official announcement has recently been made that the Queen has appointed the undermentioned gentlemen to Chairs in Medical Science, newly established in the University of Aberdeen:—Midwifery, Dr. Dyce; Botany, Dr. Dickie; Materia Medica, Dr. Harvey; Institutes of Medicine, Dr. Ogilvie. These appointments are in virtue of the changes in the collegiate system of Aberdeen lately made at the instance of the University Commission. The dual establishments—King's and Marischal Colleges—no longer exist; the individuality of Marischal College is extinguished, or at least merged in that of King's. Thus the lecturers recently appointed to the Chairs newly constituted in the University of Aberdeen for the most part held similar appointments in the lately existent Marischal College.

Drs. Dyce and Ogilvie were both lecturers in the branches of which they have been made Professors. Dr. Harvey is a native of Aberdeen; he was formerly a lecturer on the Institutes and Practice of Medicine, and was also one of the physicians to the Royal Infirmary. Dr. Dickie is also a native of Aberdeen, and previous to his appointment to the Chair of Natural History in Queen's College, Belfast, he was for several years lecturer in King's College, Aberdeen. By the fiat of the University Commissioners the new College arrangements now come into effect, and Marischal College ceases to exist as an institution. On the 17th of September, 1505, Bishop Elphinstone founded King's College; and on the 15th of September, 1860,—just 355 years afterwards,—it receives a fresh accession of dignity, and becomes the collegiate representative of instruction in Aberdeen, its rival College, with many hallowed associations, being now extinct.

GENUINE FOOD FOR THE POOR.

The very important question of the application to the City of London of the Adulteration of Food Act, is under the consideration of the Commissioners of Sewers. At the last meeting of this body, Mr. Deputy Scott said that he perceived by the reading of the Minutes of the preceding Court that an Act of Parliament that had just been passed by the Legislature had been referred to a Committee for consideration. The Act to which he alluded was the Adulteration of Food Act, and the provisions of that Act appeared to him to be of a very important character, because if it was carried out the effect would be to enable the poor to obtain genuine food of every description —bread, milk, beer, &c. The Act, however, was only permissive, and he was anxious to know whether the terms under which the consideration of the subject was referred to a committee were such as would enable them to recommend that the Act should be adopted in the City of London if they thought proper to do so. It appeared to him that this Act of Parliament was a most beneficial one, and he hop-d to see it carried into effect. The Chairman said that by the terms of the reference the Committee were invested with full powers. This important initiative will, doubtless, be observed by municipal bodies and vestries throughout the kingdom; and we trust soon to report that those means are provided for "enabling the poor to obtain genuine food of every description.'

THE CHOLERA AT GIBRALTAR.

The cholera, which has long hovered over Spain, and from which Malaga has been free but a fortnight, has passed the frontier and reached Gibraltar. The same dispatch which brings this ominous intelligence adds the cheering statement that "every precaution that sanitary science can suggest to prevent the further spread of the epidemic has been adopted by Sir William Codrington, on the advice of the principal medical officer, Dr. Paynter." No doubt that able medical officer will suggest precautions as to the feeding, clothing, and exercise of the healthy, and the segregation of the sick, which will be attended with useful results. The statement, would, however convey a far more solid sense of security to the mind of the well-informed medical reader if he were not obliged to reflect that in respect to the origin and mode of extension of those terrible epidemic diseases, Asiatic cholera and yellow fever, the medical world is still at issue, and have not yet been able even to agree upon so important a question as the communicability of these two diseases. Dr. Bryson, Inspector-General of Hospitals, R.N., in a preface to a recent "Report on the Health of the Royal Navy," forcibly illustrates the evils resulting from the want of consistency and uniformity in the opinions held respecting the means to be adopted when either malady makes its appearance in a ship of war. While one class of medical officers, assuming that the disease, like small-pox and measles, spreads by infection, recommends the segregation of the sick from the healthy, and a change of locality with improved ventilation; the other, believing that it is the offspring of some unknown cause of an atmospheric nature, or of offensive matters contained in the holds, recommends the latter to be cleared out on the spot, and the sick to be removed on shore, whether the disease may or may not be prevalent amongst the inhabitants. Dr. Bryson remarks that it is clearly evident that one of these modes of precedure must be wrong, or at all events superfluous; for if the disease does not spread by infection, the separation of the sick from the healthy can do no good, but, by creating unnecessary alarm and confusion, may cause considerable evil. But if it does spread, like small-pox and measles, by infection, then a heavy responsibility rests with those who recommend measures which can only tend to its extension, and the destruction of probably a third of the ship's company, and possibly hundreds of the population on shore. This kind of commentary is far from reassuring to the civil population, or complimentary to medical science. But it is necessary to face our deficiencies if we would supply them. In no matter do we require more definite facts on which to build a system of treatment than in relation to Asiatic cholera—that terrible epidemic which now sets at naught our science in much that pertains to its origin, its progress, and its cure.

THE ORIGIN OF SPECIES.

Dr. Daubeny, the Professor of Botany in the University of Oxford, has put forth some "Remarks on the Sexuality of Plants," with particular reference to Mr. Darwin's work on the "Origin of Species," in the form of a pamphlet, in which this learned physician records his emphatic dissent from Mr. Darwin's theory regarded from its obtanical side. Dr. Daubeny demurs at considering the distinctive faculties of the beings that stand in the higher ranks of the creation as mere developments of those which exist in the lower. He can hardly bring himself to believe that the activity, the quick perceptions, the various instincts which we observe in the vertebrata can have been elaborated out of the dull, vegetative faculties of the invertebrate class; and still less that the reason, the imagination, the moral sense of man can have been owing to a mere expansion of the brain of the gorilla. Dr. Daubeny attacks the theorists who rely upon variation and natural selection as adequate causes for the multiplication of species, by examining critically the facts connected with the achievements of human skill in the domestication of animals, to which Mr. Darwin and his followers constantly refer with confidence in support of their theory. He observes that human ingenuity has doubtless introduced many very striking deviations both in plants and animals from the original type; it has never yet, however, proceeded so far as to give rise to what naturalists would regard as a new species—that is, an individual incapable of producing a fertile progeny with any other member of the parent stock.

DRUGGISTS NO POISONERS.

The importance of adopting a simple precaution, such as that of a narrow neck in bottles containing potent medicines and an angular-fluted figure in addition for external applications alone, can only be fully appreciated by those who know how frequently life has been sacrificed in the course of only a few years by mistakes, originating either in the druggist's shop or with the patient, such as would have been prevented by a peculiarity in the form of the vessel, which, from its causing the potent fluid or powder to drop slowly instead of running in a full stream, could not fail to attract the attention of the manipulater. We do not propose that this contrivance should supersede the most careful preparation of the labels; indeed, it is only suitable to recall attention to the label when this has been accidentally misread. We do not propose that it should supersede any precaution, safeguard, or conscientious care now employed for the purpose of preventing accidental poisoning. We desire that it shall be superadded to all these. In the subjoined list of fatal accidents there is scarcely one which this plan would not have saved. It may be adopted without difficulty, delay, or inconvenience. The experience of the Army Medical Department, and of at least one large dispensing establishment, has demonstrated its practicability.

For the sake of the public safety, druggists should forthwith adopt this precaution; and patients and physicians should combine to require it at their hands. We mentioned last week four cases of accidental poisoning which might thus have been prevented. We turn to the pages of the *Pharmaceutical Journal* as presenting probably the most reliable record of these fatal occurrences, and we find a long list each year. It is certain that our list is far from complete, since it does not even include two of the fatal accidents with which our memory supplied us last week. Moreover, it omits that far larger number of cases in which death has been escaped by a lucky chance, or by the urgent and skilful application of antidotes. But it furnishes a terrible roll of misadventure, such as probably few would expect to see. It supplies, too, a most unanswerable argument for the immediate improvement of the methods of storing poisons in chemist's shops and elsewhere, and of increasing the characteristic distinctions of potent medicines when dispensed to invalids. The precaution which we recommend is at once effective and practicable. Others may, perhaps, still be suggested.

Beginning with the fatal cases ofaccidental poisoning recorded in the year 1859, we find—

Strychnine given in place of santonine, in Belgium, Oct., 1859, resulting in the death of a child.

Laudanum given instead of black draught by a chemist's assistant at Canterbury, Nov., 1859, causing death to a young man named Cole.

Child poisoned by having essential oil of almonds administered instead of a mixture for a cough.

Arsenic accidentally taken by a young lady instead of sulphur, at East Ville, Lincolnshire, April, 1860, resulting in death.

A child accidentally poisoned by a nurse at Walworth, March, 1859. An *embrocation* given containing *laudanum* instead of the proper medicine. "The coroner said if an Act of Parliament were passed, compelling chemists or medical men to dispense all poisons or poisonous mixtures in colored bottles, instead of white, such fatal mistakes as the present would be prevented."

A child poisoned at York, April, 1859, by the administration by its parents of a teaspoonful of a mixture containing essential oil of almonds, which had been supplied to them in mistake by a chemist for "oil of sweet almonds and syrup of violets."

Child poisoned by *colchicum wine*, sold by a chemist at Camden-town, instead of *antimonial wine*, Feb., 1859.

Woman poisoned by an overdose of Dover's powder, alleged to have been given her by mistake as an out-patient of St. George's Hospital, Nov., 1859.

Wholesale poisoning by arsenic at Bradford, Dec., 1858. Query—If the cask containing the arsenic had been distinguished from that containing *daff* by some such contrivance as making it impossible to take off the lid or move it without causing a bell (fixed somewhere on the cask) to strike, might not the young man have been warned by it, and the *twenty-five deaths* been so prevented?

Woman poisoned at Manchester, October, 1858, by taking muriate of barytes instead of salts.

From *The Times*, Sept. 30th, 1859:—"Last week five persons suffered considerably from taking an overdose of tartar emetic, the person who administered the dose as a cooling beverage to the others and to himself having *completely forgotten* the difference between tartar emetic and cream of tartar." Note—Had the tartar emetic been in a vessel indicating its poisonous character, the "forgetfulness" would have been remedied; the person could only have got the powder out of one of the new bottles in minute quantities at a time.

Child poisoned by laudanum at Newtown, near Wigan, Aug. 13th, 1858, obtained from a druggist without *any caution* as to its use (no poison label even.) The mother administered a teaspoonful of the laudanum, instead of a mixture the child was in the habit of taking.

Poisoning by corrosive sublimate. A young lady at Colchester, July, 1858, swallowed a glass of the solution instead of camphor julep (the solution was bought for destroying bugs), and died from the effects.

A man poisoned at Brompton, Dec., 1856, by a druggist's assistant giving him a lotion containing prussic acid (which he was preparing for some one else), instead of castor oil, which the man asked for.

A man at West Bromwich, Dec., 1856, swallowed four grains of strychnine in mistake for a powder for bowel complaint. He ultimately recovered under medical treatment.

A lady was supplied with laudanum instead of tincture of rhubarb, by a druggist at Glasgow. The bottle had contained tincture of rhubarb before, *and was so labelled*. When sent to be refilled, the assistant filled it with laudanum. Reported by M.D.' Glasgow, May 18th, 1856.

A man poisoned at Newry, Feb., 1856, by having tincture of aconite administered by an apothecary's assistant instead of tincture of chiretta.

To this long list, gathered cursorily from the contemporary record of a brief space, we could add many from memory not recorded. Thus we could recall the death of a lady staying at one of the large hotels at the West-end, who was nearly poisoned about two years ago by a maid administering a two-ounce morphia mixture, instead of a saline draught. It is somewhat longer since a retired physician lost his life through having a mixture made up, each dose containing six grains of morphia, instead of six minims of the solution; but it is as nearly as possible two years also since the Hon. Mrs. Anson took a vial full of laudanum by mistake for a gout draught. The vial was labelled "poison;" but she did not read it. So also the bottle from which the late Mr. Dawson poured out for himself what he intended to be tincture of orange peel was labelled tincture of aconite; but his eye falling carelessly read "tinct. aconiti" as "tinct. aurantii." So the label "pulv. opii Turc." misled the ignorant shop girl who dispatched her patient by administering that poison instead of "pulv. rhei Turc." But it is unnecessary either to multiply texts or to prolong discourse on a theme so lamentably and conclusively proved.

A MUTINY AT GUERNSEY.

THAT excellent and discreet chief, the Lieutenant-Governor of Guernsey, is bent on imitating, on a small scale, and with curiously infelicitous accompaniments, the autocratic pleasures of the military ruler of a neighboring empire. Whom he loves he will exalt; whom he desires shall serve him; his will shall be done, and he will not only be obeyed, but applauded. Recent events in Guernsey have been moulded so as curiously to caricature Gallic precedents; but the results indicate the comparative inflexibility of the English element. The Lieutenant-Governor, after insulting the medical officers of the militia by associating with them in the performance of their medical duties a homœopath, refused to accept their resignation. That question has been referred to the Home Office, and the strife is still pending. Meanwhile the unwilling regimental surgeons are ordered to return to their duty, which they do under protest, still maintaining their position of resignation. Various efforts to terrify and to cajole having failed, and the good sense of the press and civil public being outraged by the injustice and want of sense characterizing the whole proceeding, the Lieutenant-Governor absents himself for a time from his command. On his return, a military banquet is got up by his staff-officers; representatives of the press are not present, but an official report is forwarded to a newspaper, according to which "vociferous applause" is plentifully bestowed on all that was said; and the Lieutenant-Governor, being declared to be the most beloved and amiable of men, replies to his subordinates: "I thank you for this demonstration of feeling, and be assured that no cabal, however crafty—no clamor, however loud—and no press, however powerful—will ever cause me to swerve." The clamor, the cabal, the powerful press, are ten surgeons of the militia and the Guernsey newspapers. It must be satisfactory to their feelings to be alluded to in terms of such respectful terror, but assuredly they can have no power other than that which they derive from the strength of their cause. The unanimity of this officially-reported military festival, celebrating the triumph of General Slade in compelling his militia surgeons to do duty under protest and after resignation, was sorely marred by the insubordination of a company of riflemen, who refused to serve as a guard of honor to the Lieutenant-Governor on his way to dinner. These recalcitrants have been forthwith punished by degradation to another battalion; and, being ordered to return their uniforms and accoutrements, formed a procession of porters' trucks, on each of which the uniform and accoutrements were so disposed as to represent a prostrate soldier, and passed through the streets headed by a band playing the Dead March in "Saul," and accompanied by an immense crowd, cheering and singing "Cheer, boys, cheer!" and "God save the Queen!" It is difficult to treat such a proceeding seriously, we imagine; and there is probably no article in the *Unity Bull* which contemplates punishment for such an offence. But we think the whole proceeding makes it tolerably evident that General Slade, who, in his short career of government, contrives to disgust the medical officers of his force, while he refuses to permit their resignation, drives the *élite* of his soldiers into a state closely bordering upon open mutiny. The medical service has been now for some months completely disorganized, and performed by officers who are straining every nerve to get their resignations accepted. The rank and file promise soon to arrive at the same desirable condition. Surely it is time that General Slade sent in his resignation.

SIR B. BRODIE ON TOBACCO-SMOKING.

SINCE the prolonged discussion of the effects of tobacco-smoking on the human system which was initiated in the columns of THE LANCET, the controversy has never wholly ceased. Blasts and counterblasts have been blown by friends and enemies, and meantime the consumption of tobacco has continued. The last voice bringing the influence of age and authority was that of Dr. Seymour, formerly one of the physicians of St. George's Hospital and Commissioner in Lunacy. Dr. Seymour confirmed all that the most deadly enemies of tobacco have asserted in these columns. He thought King James feeble in his condemnation of the "filthy and deleterious herb," and painted in the gloomiest colors the attendant demons of lunacy, dyspepsia, and muscular and nervous atrophy, that ride the clouds of tobacco-smoke, and direct the wanderings of its empyreumatic oil through all the veins. Sir Benjamin Brodie, from the rural retreat in which he awaits in darkness some lightening of his misfortune, now comes forward to discuss the use and abuse of tobacco. His active mind will not permit indifference to human interests, even in retirement: it is with him as with princes, whom Bacon likens to the planets, that have much veneration but no rest. The utterances of Sir Benjamin Brodie on a subject interesting the health of so many millions, and still hotly contested, justly receive great respect and carry great weight. His letter is marked by extreme moderation; this will certainly increase its influence. It brings no new facts or theories to our knowledge, but comments with acuteness and without exaggeration upon accepted truths. The powerful oil of tobacco—which destroyed life in the Boccarmé case, which is a drug too severely pressing to be popular in medicine, in however small doses, and of which a drop will destroy the life of a cat—cannot circulate in the blood of the habitual smoker without producing decidedly injurious effects. This dictum is not open even to discussion. But, on the other hand, Sir B. Brodie concedes great weight to the arguments of the advocates of tobacco, who recall the fact that it belongs to the same class of nervine agents as alcohol, Indian hemp, the kava of the South Sea Islanders, the Paraguay tea, coffee, and even tea—products which are eagerly sought out by all the tribes of men in every part of the world, and universally consumed.

> "A disposition so universal may almost be regarded as an instinct, and there is sufficient reason to believe that within certain limits the indulgence is useful. But we must not abuse our instincts."

The whole argument is thus narrowed to the discussion of degree. What constitutes the abuse of tobacco, and who is an habitual smoker? A contemporary public instructor, commenting upon Sir B. Brodie's letter, expresses the opinion that

> "Half a dozen pipes or three cigars per diem do not constitute excess; but *an ounce of tocacco*, smoked, or chewed, or snuffed, during the twenty-four hours, is excess, and of the most dangerous description. We are perfectly willing to believe that the statistics of the lives of inveterate smokers will be found below the average; but what is an inveterate smoker? He is a man whose throat and abdomen are one huge meerschaum. He eats, drinks, and sleeps upon tobacco. He sucks a filthy short pipe till his teeth, his tongue, and his very finger-nails become stained and impregnated with essential oil; or else he chews a 'quid' till his complexion is as yellow as a guinea, and his hand trembles like that of a drunkard afflicted with delirium tremens."

Few will be disposed to differ from the description of excess, but many will desire to narrow the limits prescribed to moderation. Sir B. Brodie does not omit to emphasize the portrayal of the injuries inflicted upon the system by perseverance in this habit. It is this part of his argument which will be read with the greatest interest and profit; for assuredly the consumers of tobacco stand now in more need of warning than of indulgence.

"The earliest symptoms are manifested in the derangement of the nervous system. A large proportion of habitual smokers are rendered lazy and listless, indisposed to bodily, and incapable of much mental exertion. Others suffer from depression of spirits, amounting to hypochondriasis, which smoking relieves for a time, though it aggravates the evil afterwards. Occasionally there is a general nervous excitability, which, though very much less in degree, partakes of the nature of the delirium tremens of drunkards. I have known many individuals to suffer from severe nervous pains, sometimes in one, and sometimes in another part of the body."

Cases of neuralgia and amaurosis are enumerated as illustrating the evil effects of tobacco-smoking, together with "other symptoms of deficient nervous power."

"But the ill effects of tobacco are not confined to the nervous system. In many instances there is a loss of the healthy appetite for food, the imperfect state of the digestion being soon rendered manifest by the loss of flesh and the sallow countenance. It is difficult to say what other diseases may not follow the imperfect assimilation of food continued during a long period of time. So many causes are in operation in the human body which may tend in a greater or less degree to the production of organic changes in it, that it is only in some instances we can venture to pronounce as to the precise manner in which a disease that proves mortal has originated. From cases, however, which have fallen under my own observation, and from a consideration of all the circumstances, I cannot entertain a doubt that, if we could obtain accurate statistics on the subject, we should find that the value of life in inveterate smokers is considerably below the average."

It might have been desired in the interests of society, perhaps, that the distinguished writer had confined himself to the enunciation of these striking experiences; for it may almost be feared that the encouragement to smoking held out in one part of the letter will neutralize the judicious and emphatic warnings which we quote. The habit is so widely and perniciously prevalent, that it needs repression because it is excessive. Encouragement can only add to the excess.

DEATHS FROM THE INFLAMMABILITY OF CLOTHING.

The public mind, so slow to be moved in all that suggests the sacrifice of old habits, takes but lazily to the idea of adopting any of the solutions recommended for rendering ladies' light clothing non-inflammable. Meantime a constant succession of deaths occur due to this sole cause. The total number of persons who died in the United Kingdom from burns and scalds during the year 1858 was 3125. Of these, no small proportion met with their deaths by their clothes catching fire. Neither number nor rank is wanting to emphasize the sad calamities due to the habitual employment by ladies of light and combustible attire. This last week adds to the list of victims the Countess de St. Marsault, one of the Princess Clotilde's ladies of honor, who has just expired at Paris from the effect of burns which she had received while endeavoring to save another lady whose dress had caught fire at a ball. Not even royalty has escaped these perils; and the severe burns some time since suffered by the Princess Frederick William of Prussia, owing to the ignition of her dress while she was in the act of sealing a letter, led to the institution of the latest and most successful inquiries into the means of preventing the ignition of light textile fabrics. These investigations were undertaken at the express desire of the Queen; and it is stated by Messrs. Versmann and Oppenheim that the solutions of tungstate of soda, and other salts which they recommend, may be employed without risk of injury to the texture or colors of the fabric. Granted that there may be a tinge of partiality in the opinions of these chemists, so valuable an immunity is cheaply purchased by the loss of a creamy shade of whiteness, or the variation of a tint in the many-colored gossamer robes of fashion. Let our modern beauties shun the example as they would the fate of the moth. Modern chemistry offers them the means of decking their forms in bright vestments which defy the flames that may in a moment render those they now wear more fatal than the robe of Dejanira. Steeped in these chemic waters, their stuffs will crumble, but never burn amidst the fiercest flames; and decked in these plumes, rivaling the feathers of the phœnix, beauty may frolic secure from fire.

AMERICAN DIPLOMAS.

The difficulties which the Medical Council have encountered in resisting the claims of many uneducated and unintelligent persons holding American diplomas in Medicine and Surgery, have evoked the expression of sympathy and shame from the more respectable section of the medical profession across the Atlantic. They avow frankly, that such diplomas are, in a large number of cases, wholly destitute of value. They afford no indication either of intelligence, study, skill, or good conduct. The graduate of an American chartered medical college, or the licentiate of a county or state medical society, may be an educated and accomplished gentleman, or he may be an ignorant quack-salver, destitute of any claim to that title. It is right that this should be widely known, and that we should reflect upon the authentic avowal of a respected American journalist. An American medical contemporary states that the ease with which charters are now obtained from State Legislatures, for every nondescript association of men, whether for proper or improper purposes, has effectually broken down all safeguards to respectability, and thrown the field of Medicine widely open to every species of adventurer. Charters are granted by State Legislatures to any and every body of men, for any and every conceivable purpose, without discretion or reserve. At nearly every session a batch of medical institutions are chartered, embracing every shade of quackery; and these, equally with the respectable and legitimate schools of medicine are entitled to confer the degree of M.D., and to represent themselves abroad as universities. It is difficult to imagine a more deplorable state of confusion than such reckless State patronage of ignorance and quackery must produce. Already it threatens to disorganize the educational system of the profession in America; for adventurers are thus freely enabled to purchase that academical status which only education can confer in other countries. The inevitable result must be, that since we have no means of distinguishing here, amongst the multitude of American colleges, those which apply the necessary tests to their members from those which admit the most unworthy persons, American diplomas will fall into discredit, and will be regarded as of no value. The remedy which it is proposed to apply is of a local character; and the American Medical Association taking cognizance of this state of things, it may result that the test of respectability which degrees fail to afford will be furnished by admission to that and other associated societies. It is obvious, however, that this voluntary test will have only a partial and local value. Meantime, it would appear that even the most respectable colleges are not quite free from taint. A protest has been forwarded to us, emanating from the Newark Medical Association, N.J. in reference to a diploma granted by the New York Medical College, which has always held a high place amongst the trans-atlantic educational institutions. From the protest and resolutions drawn up by this Association and assented to by others, it appears that the person to whom it was granted was a man who had for years painted and peddled window-shades, and subsequently became a dealer in quack pills and salve; that he was a grossly ignorant person; and his "examination, both by the faculty and the censors, must have been conducted in the most unjustifiably careless manner;" all which is respectfully submitted to the American Medical Association, with sundry suggestions "to remove the reproach cast upon the profession by the conferring of the diploma upon so unworthy a person, and prevent a repetition of similar grievances in all future time." The New York College has refused to revoke the degree. The Medical Association is called upon to enforce the revocation, or to exclude the College from representation at its meetings. This disposition to invoke the influence of the Medical Association as a tribunal of appeal of the highest grade has now become a remarkable feature in the politics of American Medicine. It springs, undoubtedly, from the worthlessness and inefficiency of a large number of the chartered medical colleges, and is a strong practical comment upon the injurious effect of that reckless distribution of charters, of which the Medical Council is bound to take careful note in the interests of British Medicine.

Smoking in Railway Carriages.—Sir J. Tyrrell, Bart., has published a small tract, in which he recommends that persons guilty of smoking in railway carriages "should be be made to consume their own smoke." The idea is a suggestive one; but Sir John has not shown us how it is to be carried out.

PARISIAN MEDICAL INTELLIGENCE.

(FROM OUR SPECIAL CORRESPONDENT.)

If the functions of so learned a body as the Academy of Medicine be occasionally doomed to assume an almost frivolous and insignificant character (as I hold to have been the nature of the late discussion on the perchloride of iron); if its valuable time be occasionally frittered away in listening to the prosy lucubrations of the dreamer and metaphysician, it is all the more consolatory and refreshing to witness its seasons of reaction, and to feel assured that it posseses within itself the counterpoising power equal to the task of readjustment to the natural level, when, after long oscillation between theory and theory, it returns to some practical topic, the consideration of which is in unison with the useful purposes assumed as the end and object of its existence.

One of the most precious of this Society's attributes is that by virtue of which all petitions, addressed to the French Government, relating to the sale of drugs, to the licensing of patent medicines, and such like commodities, are referred to its consideration for sanction or rejection. Part of last Tuesday afternoon was occupied by the reading of the reports of the "Secret Remedy Committee," of which M. Robinet, the celebrated chemist, is the mouthpiece. In several of the petitions reported on, the Government guarantee was solicited for the sale of so called *secret* remedies, the ingredients proposed being for the most part inert substances already discarded from medicine, though in some cases they were deadly poisons, such as aconite and belladonna. This particular batch of petitions were all negatived by the Academy, and will, doubtless, be similarly treated by the Minister of Public Instruction. One supplicant, however, of a more adventurous turn of mind than his brethren in misfortune, deserves a special mention, the more so as his aspirations were of a very peculiar nature, and expressed with a candor and confidence most curious to note. His appeal runs in the following strain:—"Being a farmer in the provinces, and possessing remarkable skill in the treatment of rheumatism, whitlows, bruises, and fractures, I solicit from your excellency a license to practise as a specialist in the treatment of the above named complaints. My motive for requesting a formal permission is that I have some reason to fear annoyance and worry (*redouter des tracasseries*) from the surgeons of the neighborhood, unless furnished by the kindness of your Excellency with some protection against their jealous interference." This French specimen of the "Mr. White" tribe has thus been providentially caught *before* the fact, and will receive his quietus at the hands of the Minister. This ingenious agriculturist, with a pretty turn for medicine, who desires so ardently to devote his leisure moments to the pastime of manslaying, possesses no doubt his own little circle of admirers—his constituents in fact. I had long thought that the making of dupes was the exclusive privilege of the cunning charlatan; but experience has since taught me that the reverse more generally holds good, and the dupe it is who makes the charlatan. The pigeon, on this occasion, invites the hawk into the dove-cot, requesting him to devour its liver. (A petition such as the above is often backed by influential members of the community in which the medical amateur exercises his self-taught profession.) The etiology of quackery would be a very obscure question indeed, were it not for the fact that there exists, as there has always existed, in every nation, a numerous class of individuals whose minds, palled with maudlin sentiment and romance, and unfitted for healthy function, crave for some food of more piquant character, in which mystery and the marvellous enter as chief ingredients. Sane on all other points, monomaniac on this; neither do their manners of life nor views on other subjects present any eccentricity; and it is only by the one symptom of credulity that the flaw or twist in the intellectual apparatus can be detected. Under this form of cerebral derangement I believe to be laboring the many devotees and victims of Mesmerism, Hahnemannism, table-turning, spirit-rapping, and the kindred delusions. Like the chlorotic girl, who delights in the devouring of chalk, slate-pencil, hearth-stone, and candle-grease, so do these morbid mental appetites appease their unnatural cravings by a food equally incapable of healthy assimilation.

At the late meeting of the Society of Practical Medicine—which holds its sittings twice a month at the Hôtel de Ville, under the presidency of M. Dubois—Dr. Coursserant introduced, and apparently as a novelty (for he termed it a " nouveau procédé"), a modification of the ordinary flap operation in the extraction of cataract. Here, now, is a splendid chance for the hagglers on the question of priority: this *wonderful improvement* on the old method—which consists in carrying the knife, after the completion of the corneal section, on in the same direction for about an eighth of an inch, and so leaving a little tail of conjunctiva hanging to the ordinary corneal flap—is the common everyday operation of M. Desmarres, and I have often heard him say that *he* learnt it from Mr. Guthrie's practice, but he believed it to be of much more ancient origin. I am very much astonished to find that up to the present moment no copyright claim has been asserted.

It is an unusual circumstance, it would appear, to find salts of copper amongst the solidifiable ingredients of mineral waters. A letter, however, lately addressed to the Academy of Sciences by M. Béchamp, professor of chemistry at the Faculty of Montpellier, announces that this gentleman has detected in the waters of Balaruc (a village in the department of the Hérault) the presence of a certain quantity of oxide of copper. As the waters have been analysed at three different seasons of the year and this salt always found, it may be henceforward considered as one of its constant components. Moreover, since the recognition of this fact, another Montpellier chemist, M. Moitessier, has found copper to exist in several other mineral springs in that part of the country; these discoveries, therefore, may possibly be extended to other thermal sources, and eventually shed much light on the causes of their therapeutical virtues.

In going round the wards of the Charité with M. Beau, a novice will be not a little puzzled at seeing him scrutinize closely the finger-nails of each newly-admitted patient, telling him occasionally, after a few moments' examination of his cuticular appendage, "My friend, you had a bad illness so many months ago, a very severe illness, that pulled you down a good deal; and then you had a relapse," and so on. This sort of inverted palmistry puzzled me sorely at first, and I confess that even the explanation, when given, left me very sceptical as to the infallibility of this retrospective fortune-telling. Nevertheless, although I do not believe in Hume the spirit-medium, any more than in Hahnemann and his microdosic followers, I do believe in this sign of the past as indicated by the nails. If you look at the fingers of a man who had typhus fever three months ago, let us say, you will find on the nails, towards their centre (at that interval of time), a transverse furrow, deep and well marked, coinciding with the moment when the check in their nutrition occurred—the depth of the depression being in proportion to the severity of the illness, its breadth with the duration; and the several consecutive relapses (if such occurred) being each notched on the ungual appendices as on so many tally-sticks. Few men know that they have the past history of their own cases so thoroughly at their fingers' ends.

Professor Mantegazza, of Milan, has lately made some curious researches on the vitality of the zoosperms of the frog; these he has frozen on the one hand, and parboiled on the other, without being able to extinguish their generative powers. As regards the former case, he has found that the zoosperm will stand four separate and consecutive freezings before its vitality is put an end to; but the fifth repetition of this cool treatment proves a little too much for the minute entity, which in this particular is only half as fortunate as the cat with her nine lives. Another and a very droll discovery made by the same Professor (who, by the way, should be called to order by some member of the Society for the Prevention of Cruelty to Animals) is that the testicle of one frog may be engrafted into the body of another animal of the same species, so that one "froggy" may "go a-wooing" with the testicles of another froggy, and not at all *à ses propres frais:* this seems a "leetle" too much. His last experiment is far more intelligible than the preceding—in part, at least. He says, "If you transplant into the abdomen (under the skin) of a female frog, a few days before the laying of her eggs, a frog's testicle, such is the attraction between this body and the eggs, that ulceration of the abdominal muscles takes place, the male and female elements coming into contact, and so violently that the frog dies." This last result is, I confess, the only portion of the whole paper which I can conveniently credit. (For further particulars, see Reports of the Academy of Sciences.)

They now make here empty gelatine capsules, which, for humanity's sake, ought to be generalized in the practice of those gentlemen addicted to the giving of nasty medicines. They are in make like the old-fashioned needle-cases—a larger tube (shaped as is the test-tube) fitting over a smaller one, this latter being the reservoir, and varying in width and length according to dose. For the administration of creasote, turpentine, *et hoc genus omne* of unpalatable liquids, they are very convenient. They are not of novel invention, but their general use would be.

Paris, Aug. 27th, 1860.

A PAPER was read at the last meeting of the Academy of Sciences by M. Jobert de Lamballe, in which the progress of vascular and nervous reproduction, as observed during the cicatrization of engrafted skin, is accurately studied. The operation serving as text for this essay was undertaken for the purpose of remedying a deformity resulting from the removal of a secondary cancer. The region occupied by the unsightly cicatrix was the right eyebrow, the inner angle of the eye, and ala of the nose on the same side. In providing a flap destined to cover this unbecoming scar, the surgeon dissected off from the forehead a somewhat pear-shaped patch of skin, (the exact size requisite having previously been ascertained by measurement,) with the exception of a narrow slip, or pedicle, reserved for the conveyance of vascular supply to the flap; the whole was completely detached from the surrounding integument, and turned down upon the scar, (itself also deprived of its imperfect superstratum of cutis,) and there secured by the interrupted suture. The engrafted slip of tissue—

much in the position of a man who has purchased a practice in a new neighborhood, with a limited introduction—to use a horticultural phrase, took kindly to its new soil, and by the eighth day the sutures were dispensed with. The temperature of the transplanted skin remained low, however, and its texture flabby and inelastic; a slight prick with a pin on its surface was not followed by bleeding, and pressure or tickling was referred *to the pedicle* alone. That some vascular supply did, however, reach its vessels was incontestable, for the part presented no appearance of gangrene. Day after day the same experiments were repeated; at length a little blood followed the slight puncture, and a slight sensation was perceptible in the part pricked. These signs of returning vitality steadily augmented, and by the end of the third month after the operation, the graft was deemed to possess sufficient independent vigor to shift for itself; and the little isthmus being declared unnecessary, the flap was isolated, and its cut extremity turned down towards the inner angle of the eye, where the scar hitherto had purposely been left uncovered. The deformity was thus completely remedied, and the cure most successful. M. Jobert, in his remarks upon the way in which the vascular and nervous relations are established between tissues thus artificially brought into contact, draws especial attention to the consecutive advance of the two functions, the one in the wake of the other; the new circulation entailing the new innervation, and the perfect development of the former being immediately followed up by a similar progress in the latter. The author also expresses it as his opinion, that the mode in which the correct sensibility of the engrafted tissue is restored after transplantation by means of its communications with the part into which it is deposited, is a proof of the unity and identity of the sensitive function all over the body.

A paper of some interest, also sent for the perusal of the Academy of Sciences, bears the following title: "Chemical Theory Explanatory of the Assimilation of Phosphate of Lime and of the Necrosis caused by Phosphorus." The following is a summary of the author's views on these subjects:—Phosphate of lime, when administered by the mouth, undergoes a first change by mingling with the saliva, which secretion holds in solution a certain amount of phosphate of soda; a second, by the contact of the phosphate of ammonia contained in the gastric juice; and a third, due to the action of the lactic acid of the mucus secreted by the stomach—each change being marked by increased solubility. In this state the salt of lime passes into the veins, where its capacity for solution is again augmented by the presence of the carbonic acid, and the venous blood passes into the lungs strongly charged with it. During the respiratory combustion, the carbonic acid being given off and the lactic acid consumed, the phosphate of lime is alone beholden for its solution to the soluble phosphates actually present with it in the blood. If these be in small quantity, the lime is thrown down and appropriated by the osseous tissues for their reparation, a trifling amount only passing off with the urine. If, however, on the other hand, the soluble phosphates (soda and ammonia) be in excess, the lime is not precipitated, but continues in solution; little or none is distributed to the system for bone-making purposes, and all, or nearly all, is excreted through the kidneys. This ingenious theory is founded upon the following facts—one being, M. Dumas' observation of the effect of carbonic-acid water upon ivory; after twenty-four hours of immersion, plates of the latter dense substance become soft and pliable, having parted with their phosphate of lime, which is found held in solution by the water. Another, that this salt of lime becomes soluble by the addition to the water of a soluble phosphate, the capacity for solution bearing a direct ratio to the amount of the latter employed. And a third, the detection in the urine of the different phosphatic salts, both free and in double or triple combinations. With regard to the mode of production of the phosphoric necrosis, as resulting from the lucifer-match manufacture for example, the following explanation is suggested:—The vapors of phosphoric acid are inspired by the mouth. Let us suppose they there find in the saliva soda in a free state, and combining with this base, form phosphate of soda. Or if inspired by the nose, they pass into the lungs directly, and are absorbed at once into the blood; they form with the free soda there, phosphate of soda again; with the ammonia of the urea, phosphate of ammonia; and with the basic phosphate of lime, soluble biphosphate, all of which salts will prevent the precipitation, and, consequently, the retention in the system, of the most important of the earthy constituents of bone. I leave the verification of the above to your chemical readers, admiring, at the same time, M. Gouriet's very pretty and plausible theory, and his courage in advancing it at a moment when chemists and *chimiatres* are so much at a discount.

At the opening of the Academy of Medicine on Tuesday last, a short discussion took place on a subject to which I referred a few weeks back—namely, M. Lukomsky's method of treating syphilis by vaccination. I gave you at that time the pith of M. Guérin's report, kindly communicated to me by that gentleman, and I was glad to find that the Academy was not disposed to pass a different verdict from that already pronounced by the Society of Surgery. A new fact, however, came out, which seems a key to the whole mystery: the author of this method is not a medical man, and consequently, as M. Velpeau very justly observed, unable to distinguish venereal diseases from other maladies also affecting the skin—a fruitful source of error explanatory of the rise of this *soi disant* mode of treatment, which has just tottered to its well-merited fall. For Academical form's sake, the question has been referred to M. Ricord, whose report will doubtless contain a definite and final condemnation, against which there will be no appeal.

This question disposed of, M. Bouvier rose to read his report on a German work written by MM. Bibra and Geist, of Nuremberg, "On the Diseases affecting Workmen employed in the Manufacture of Phosphoric Lucifer Matches, and especially on the Affections of the Jaws produced by the Fumes of Phosphorus." This work is not very new, as it was published twelve years ago; but it seems only recently to have excited the attention of the Academy. It is divided into two parts—the first, anatomical, by M. Bibra, containing the examination, both chemical and microscopical of specimens of necrosed bone taken from workmen exposed to the fumes of phosphoric acid, this portion of the book being also illustrated by an excellent atlas. The second part is by M. Geist, and includes the pathological section of the subject, with suggestions for treatment and prevention. M. Bouvier, whose excellent report, although it well deserved a better fate, was delivered to empty benches, contained not only a digest of the present work, but also a *resumé* of the present mode of manufacturing matches, and the advisability of the Academy's urging Government to interdict the use of white phosphorus, and insist on the substitution of some less poisonous material. It would appear that the red amorphous phosphorus suggested by some chemists to meet this end is but a very imperfect substitute for the white, unless a certain proportion of chlorate of potash be added, in which case the mixture becomes dangerously explosive, and fraught with risk both to workman and consumer. The chlorate of potash alone is too little inflammable, and requires a special surface for friction—an inconvenience to which the public will not submit. MM. Bibra and Geist nevertheless recommend that this salt, chlorate of potash, be substituted generally for the poisonous white phosphorus, and that a special friction-surface—a piece of rough cardboard lightly covered with red phosphorus—be added to facilitate ignition, which, with the special surface, is quite as easily done as in the case of the white phosphorus match under ordinary circumstances. M. Bouvier concluded by paying a flattering testimony to the authors, saying that it was great praise of a work to be able to say, twelve years after its appearance, that all subsequent experience had confirmed its facts and conclusions, and he proposed that the thanks of the Academy be sent to MM. Bibra and Geist for their important services in the cause of science.

Dr. Marsillach, in a memoir crowned by the Academy of Medicine of Barcelona, on the use of the hypophosphites in pulmonary consumption, confirms the opinion of their inefficacy already expressed in your columns.

Paris, Sept. 3rd, 1860.

At a recent meeting of the Society of Practical Medicine, a report was read on the treatment of gonorrhœa by means of injections, containing in suspension the sub-nitrate of bismuth. The originator of this mode of dealing with urethral discharges is a M. Mourlon, who, from his position as a military surgeon, has had ample opportunities of testing the value of this drug in the above affection. M. Mourlon, it would appear, was led to investigate the effects of bismuth in gonorrhœa by the observation of its salutary influence upon the intestinal canal when attacked with mucous diarrhœa. The results of his first experiments were encouraging; they were persevered in, and with so much success, that this practitioner deemed it his duty to apprize the profession of this new application of a medicament already very favorably known in therapeutics. The following is the complete formula of treatment recommended by M. Mourlon:—On the first day, a warm bath and a saline purgative; on the second, four warm hip-baths and two injections of the bismuth lotion (in the proportion of five drachms of the salt to seven ounces of water); on the following days, three injections to be used daily, with the general injunction that the fluid thrown into the urethral canal is there to be retained for ten minutes each time. The Society seemed to view the method proposed by M. Mourlon favorably, and the conclusions of the report were adopted.

The sub-nitrate of bismuth is very generally employed at the Charité for dusting burns, and I have heard M. Ronat especially speak in high terms of its efficacy in hastening cicatrization, and of its soothing effects on the scorched and vesicated surfaces. The latter property, added to a pure whiteness of color, explains the popularity of the "magistère de bismuth," so much vaunted for its cosmetic virtues by the perfumers at the beginning of the century. Fifty years earlier, in the reign of Louis XV., of powder-puff memory, the chemist with whom such a discovery as that of the cosmetic virtues of bismuth originated would have been named Court-Physician and Marquis within the week, and his descendants would be occupying a big tumble-down mansion, the Hôtel de Jouvence, *entre cour et jardin*, in the Faubourg St. Germain at this moment. On the shield over the great gateway would be seen conspicuously carved in stone the arms of the noble house of Jouvence, a wig couchant and a powder-puff rampant; motto in the scroll beneath, "Nec sine pulvere." How at every turn in life one is stumbling upon one or other of the mole-hills of quackery!—wherever found, it is the duty of the conscientious practitioner to pass the plough over the ground, and to reduce the puny mountain to its natural level. Useful preparations have often made their *début* under the ill-omened auspices of charlatanism; so bismuth first came into notice under the chaperonage of a barber, and under the title of "*pearl powder*" *for beautifying the complexion.*

At the Academy of Medicine on Tuesday last, one of the members, M. Bonnafont, just arrived from Edinburgh, and glowing with grateful enthusiasm on the strength of Scotch hospitality, thought it incumbent upon him to deliver a short address, most complimentary to the practice of Edinburgh generally, and Dr. Simpson in particular. M. Bonnafont described in the Academy the method for arresting hæmorrhage after amputation devised by the talented Scotch Professor, and urged upon the Parisian hospital surgeons the adoption of acupressure in their practice. He also showed one of Dr. Simpson's uterine supporters, of the good results of which he himself had been an eye-witness. M. Velpeau, in reply to these observations, stated that he himself believed, from his own experiments, that acupressure, such as that described by M. Bonnafont and practised in Edinburgh, was an uncertain means of arresting hæmorrhage, and would never supersede the ligature, although he readily admitted the imperfection of the latter means, and thought it most advisable, when possible, to avoid the presence of a foreign body in the wound. M. Velpeau had lost sight of acupressure for the last year and a half, when M. Fouchet undertook to investigate by experiment the amount of benefit to be obtained from this plan, in comparison with the ordinary method. M. Fouchet, who was most enthusiastic and confident at the time, had not published his observations on the subject; and M. Velpeau thought that his silence boded no good in favor of acupressure. He had himself, in 1830, adopted a modification of the same process, and had at the time a difference concerning its right of priority with M. Amussat, by whom M. Velpeau's claim was contested. He had, however, returned to the ligature, and was disposed to stick to it until he saw some better method proposed, and such a method the acupressure as described certainly was not. M. Depaul, in his turn, criticised the uterine supporter shown by M. Bonnafont. He did not believe that it was safe; it often set up inflammation of a dangerous character, and on its removal the womb invariably reassumed its unnatural position, unless—and these were the cases called cures—the organ had, by the inflammation produced been glued to the surrounding textures, and so rendered immovable.

Allow me, in conclusion, to answer a question, namely,—What is the real position of the sick and wounded of the heroic Garibaldi? Out of the last ten years of my life, I have spent the greater part of eight in the Neapolitan dominions, and am, therefore, in some measure, entitled to an opinion on the subject. My answer is, that the sick and wounded of Garibaldi's army are in a position which few English dogs would voluntarily accept, and this, too, supposing that they are no worse off than the patients at the large central hospitals (civil and military) at

Naples. The great Ospedale degli Incurabili at Naples is the foulest receptacle for the unfortunate sick that was ever beheld, and this entirely from neglect and mismanagement on the part of the administration. It is composed of two enormous wards, several hundred feet long, bisecting each other towards their centres, so as to form a cross. Ventilation is maintained almost exclusively by the doors at the extremities, which are usually left open, and, according to the change of wind, the currents of foul air set either up or down. On approaching the bed-side of a patient, the visitor is struck by the stench proceeding from a niche hollowed out of the stone wall in the interval between each bed. This niche is the water-closet. It is or is not, as may chance, provided with a wooden cover, to prevent the escape of the ammoniacal effluvia; and each patient is provided with one of these pest-generators on either side of his bed-head, and at about two or three feet from his nose. That the Neapolitans can do better if they choose is proved by the arrangement of the two small clinical wards which form two little oases in the heart of this huge sink of filth. These little wards contain six beds each; one for men, the other for women. They are fitted up with comfort,—I might almost say luxury,—and are scrupulously clean. Their cost of maintenance is defrayed by the University, and they are under the immediate care of Dr. Mamfré, the Professor of Clinical Medicine, on whose administrative capacity they reflect much credit. It is, however, painful to witness the contrast between the neatness and comfort of the clinical department, and the filth and dirt of the general hospital. I remember once remonstrating with one of the physicians on the wretched condition of an hospital, the pecuniary resources of which are enormous, and which consequently could not plead poverty as an excuse for mal-administration. "It is true," he said; "but the patients are better off here than at their own homes." So it may be for the Neapolitans; but the Garibaldians are not Neapolitans—I mean, not men who can lie in the sun all day, be it on a dunghill, catching their own fleas. Many of them are of gentle blood; and all, I trust and believe, are fit for better treatment than that which I have detailed. They are men who, no doubt, value cleanliness, and will appreciate a change of linen now and then; consequently, old sheets, shirts, towels, and everything of this description, *cotton* as well as linen, will be most acceptable. With fighting they seem to have done for the present; but the girdle of marshes which surrounds Naples from Pæstum up to Fusaro and Patria will, ere long, be evolving malaria, under the influence of the September rains on the hard-baked soil, and the troops will be decimated by that frightfully fatal form of intermittent fever there termed *la perniciosa*. Quinine, ipecacuanha, concentrated beef-tea, and brandy, will then be of the greatest service to them; and these are not readily obtainable, in any quantities at least, in that part of Italy; salicine, tartar emetic, bad rum, and broth tasting strongly of the pump, being the usual substitutes for the above indispensable agents in the treatment of fever. How many lives may at present be dependent on English generosity it is impossible to say. Our Government has done little towards the saving of Italy; let the English medical body, at least, do their utmost to save the Italians.

Paris, Sept. 10th, 1860.

Obituary.

THEOPHILUS THOMPSON, F.R.S., F.R.C.P.

Death has been paying us sudden and startling visitations of late. Month after month our ranks have been thinned by the unexpected fall of some of our best and ablest men; and now yet another has been added to the list, already too long. We are sure that the recent announcement of the death of Dr. Theophilus Thompson was observed by none of our readers without genuine sorrow and concern. By his removal, a life of more than ordinary activity, usefulness, and scientific success has been brought to an untimely close; and not merely a large circle of private friends, but the whole medical brotherhood, and, indeed, society at large, have sustained a loss which will be neither soon nor easily repaired.

Dr. Thompson commenced his professional studies at St. Bartholomew's Hospital, and subsequently continued them for two years at Edinburgh, where, after familiarizing himself with the teaching and practice of the Dublin and Paris schools, he graduated with distinction in 1830. He then settled in London, and was shortly afterwards elected Physician to the Northern Dispensary. For fourteen years he continued to discharge the duties of this office with the most laborious care, conscientious precision, remarkable skill, and undeviating tenderness to the sick poor. About this time Dr. Thompson took a special interest in diseases of the nervous system; and some of the fruits of his investigations were embodied in the articles "Hysteria," "Neuralgia," "Chorea," and others, contributed to the "Library of Practical Medicine." These articles were in advance of the time at which they were written: clearly and elegantly composed, they also carry the stamp of correct observation, close reasoning, and great practical skill. He lectured for some time, on the Practice of Medicine, at the Grosvenor-place School of Medicine, when this institution was directed by Mr. Samuel Lane. Here, as elsewhere, he won the respect and affection of colleagues and pupils.

In 1847 Dr. Thompson was appointed Physician to the Hospital for Consumption, then instituted in Marlborough-street, prior to the erection of the present building at Brompton and in the organization and management of this noble institution he continued to take a prominent part almost to the close of his career. It was thus that his later inquiries became specially directed to the investigation of thoracic disease, and enabled him to make those contributions to our knowledge of pulmonary affections which gave him so high a place in professional estimation, and made his opinion at once eagerly sought for, and highly valued.

Dr. Thompson enjoyed at the Brompton Hospital great opportunities of investigating the pathology of pulmonary diseases, and of testing the value of remedies proposed for their treatment by himself and others. Of these opportunities he availed himself with rare diligence and discrimination, and his published papers afford good evidence of the success of his work—valuable for the errors which it refutes as for the truths which it advances and confirms.

Numerous, however, as are the fruits of his labors which we have reaped, we are assured they are but few compared to those which would have sprung from his inquiries if they had been permitted to be continued.

Dr. Thompson helped much to remove the mystery which for a long time obscured the art of auscultation, and published some valuable and fruitful hints on the subject, with a view to the simplification of terms and arrangement. He early drew the attention of the profession to the value of cod-liver oil in the general treatment of phthisis, and to the use of bismuth and oxide of zinc in the alleviation of some of its most distressing symptoms. In 1844 he prepared a laborious, learned, and otherwise admirable account of the successive epidemics of influenza, issued by the Sydenham Society. In 1856 appeared his Clinical Lectures on Consumption, delivered at the Brompton Hospital—a work at once eminently suggestive and practical, and indicative of the author's remarkable fertility in therapeutic resources, and of his mastery of those minor details of management which conduce sometimes more than medicine to the successful treatment of disease. In the following year he published his Lettsomian Lectures, previously delivered before the Medical Society of London. The theme again was phthisis, and in the treatment of it he revised some of his earlier opinions, and exhibited that disregard of self, that candid and genial acknowledgment of the labors of others, and that unaffected love of truth for its own sake which so eminently distinguished him amongst his brethren.

More lately the medicinal use of ozonized oil occupied Dr. Thompson's attention, and after a carefully conducted but incomplete series of experiments, he directed the attention of the profession to the subject, in a paper published in the last volume of the "Medico-Chirurgical Transactions." His last paper was on the Changes of the Blood produced by the Administration of different Oils. It was read before the Royal Society, and was justly considered to be a contribution of great value.

These, however, were but a few of the scientific subjects which engaged Dr. Thompson's thoughts. Much he proposed, which, if he had lived, he would have executed.* One design only we shall mention, because its object would supply a peculiar desideratum. He contemplated the production of a systematic work on the Practice of Medicine, which was to have been based on the records of typical cases, and confined, in its treatment of general theories, within the strictest limits which a rigid induction from them would justify. This was an original and great idea; and it is to be hoped that his son, who has already given evidence of his father's talents and virtues, will not allow the materials collected for its realization to be lost.

As early as 1855, slight indications were observable of that progressive muscular atrophy which, in 1859, compelled Dr. Thompson to withdraw from the active duties of his profession, and, a later period, terminated his life. In 1857 and 1858, he derived some benefit from the use of the Buxton waters. In 1859, he spent some weeks, under the care of Dr. Wetzlar, at Aix-la-Chapelle, but without any lasting improvement. The progressive failure of muscular power, and other symptoms associated with it, suggested to the minds of the medical friends in attendance upon him the existence of softening of certain parts of the spinal cord; but he himself said this hypothesis was not needed to account for his symptoms, and was inadequate to explain them. At first the muscles of animal life were alone engaged; by-and-bye those of respiration became involved; and in this condition he was attacked with bronchitis. Declension was now rapid. The bronchi became loaded with mucus, which could not be expelled; and though the intellect remained strong and unclouded, the physical power succumbed, and he entered into his rest on the 11th of August, in the fifty-third year of his age.

Dr. Thompson was a regular attendant at the Medical and Royal Medical and Chirurgical Societies Many of his papers were read before them, and were recorded at the time in the pages of The Lancet. In debate he was clear, argumentative, and suggestive. He was thoroughly independent. He was the constant friend of free discussion and a free press. When a base conspiracy was formed against this journal, and when that conspiracy developed itself at one of the annual meetings of the Medical and Chirurgical Society, Dr. Thompson placed himself foremost amongst the defenders of The Lancet. This was an act so characteristic of the man, and so honorable to his memory, that we cannot pass it by. In a few energetic, noble, and convincing sentences he demolished the sophistry and the malignity of our opponents. This was the more to his credit as he was totally unconnected with us, except as an occasional contributor. This tribute to the only independent medical journal which existed was spontaneous and disinterested. It failed, indeed, to convince the majority of a packed meeting of their cowardly and contemptible conduct; but out of the meeting-room his speech produced a result which, whilst it placed him in a position of the highest honor, covered the conspirators with irretrievable disgrace. We have no cause to regret the results of that memorable onslaught on our credit and independence. The Lancet flourishes: where are the conspiraters ?

Our limits must content us with this imperfect sketch of Dr. Thompson's medical career. In questions of treatment, and in the scientific inquiries of medicine, his opinion was esteemed by his professional brethren amongst the very first. That he did not rise to quite a corresponding notability with the general public may be attributed, perhaps, to a slight excess of scientific caution and social reticence, which refused to bow to the popular taste for a certain dogmatism and pretentious positiveness. Dr. Thompson's intellectual habits were carefully formed, and his discriminating taste in literature and composition told most favorably on his own style as a writer. Amongst the most pleasing characteristics of his mind were a genial fancy, a playful humor, a fluent elegance of speech, and a remarkable facility for illustrating the chance subjects of conversation by the resources of a richly stored and highly cultivated mind. An almost chivalrous devotion to truth was a leading feature, not only of his scientific enterprises, but of all the thoughts and occupations of his life. In the cheerful equanimity of his course the real principle of his life was revealed, and felt, more or less, by all who came in contact with him. It was not the struggle for gain or for professional notability, but the earnestness and loving search for truth. He accepted with simple faith the highest truths of the spiritual world, and rejoiced in following out their harmonies throughout the realms of matter and mind. It was this which gave the chief dignity and unity to his life, and made death itself something far other than an interruption or an overthrow. We can scarcely conclude this notice better than by a quotation of his own words. At the end of his Clinical Lectures on Consumption he characteristically wrote: "Am I passing beyond becoming bounds in suggesting the reflection that, while witnessing such transitions from languor and decay into undying life, we may ourselves realize the truth that death is not the end of existence; that it is something grander than human skill defeated; that when art can do no more, and friends 'weep at the vestibule as the spirit passes out of doors,' we may win glimpses of brighter scenes, where the cares and passions of this lower life shall cease to engross, and the germs of opening science shall expand into the fulness of infinite truth."

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* He had it in view to organize a Therapeutical Section of the Medical Society, which he conceived would be quite as useful as, even if less popular than, the Pathological Society.

SIR R. A. CHERMSIDE, M.D.

It is with regret that we have to record the death of Sir Robert Alexander Chermside, which took place at Oxford on Saturday last. The deceased was the third son of the late Dr. Chermside, of Portaferry, Co. Down, and entered the medical service of the army in 1810 as assistant-surgeon in the 7th Hussars. He served in France, Spain, Flanders, and elsewhere, and was present at the battle of Waterloo. Immediately after that sanguinary engagement he was promoted to the surgeoncy of the 10th Hussars. In 1821 he was admitted a licentiate of the Royal College of Physicians, London, and in 1836 elected a Fellow of that College; he graduated as M.D. at Edinburgh, and was a member of the Royal Colleges of Surgeons of London and Edinburgh, and of the Société de Médecine Pratique of Paris. For some years previous to his death he held the post of Physician Extraordinary to her Royal Highness the Duchess of Kent, and was Physician to the British Embassy at Paris. In recognition of his war services he was created a Knight Commander of the Order of Guelphs of Hanover, a Knight of St. John of Jerusalem, a Knight of the Red Eagle of Prussia (conferred for services to the Prussian troops in the campaign of 1815), and a Knight of the Legion of Honor of France.

Correspondence.

"Audi alteram partem."

TREATMENT OF RETAINED PLACENTA.

To the Editor of The Lancet.

Sir,—The following case, as illustrating Mr. Pemberton's evidence upon "Extensive Laceration of the Uterus and Vagina between the Fourth and Fifth Months of Pregnancy," especially the fourth point—namely, "that any such introduction of the hand into the uterus at the period of gestation (the fourth and fifth month) was uncalled for and improper," is at your service:—

Late in the night of May 17th, 1860, I received a message that D. C——, a farmer's wife, four months and a half advanced in her third pregnancy, was suffering pains and some amount of hæmorrhage. Not considering it necessary to visit her from the nature of the message, I prescribed a mixture of infusion of roses, with additional sulphuric acid (diluted) and laudanum, enjoining strict rest in the recumbent posture, and visited her in the morning early, when I found the hæmorrhage and pains had ceased. This state of things continued until Sunday afternoon, May 29th, when she got up and came down stairs. The result was a return of pains and flooding, which continued with more or less severity until the following day. At thirty-five minutes past eleven A.M. I delivered her of a living fœtus, about nine inches long, whose heart continued to pulsate for nearly three hours after birth. I passed my finger by the side of the funis, and found the os uteri rigid, thick, and unyielding, and was unable to touch the insertion of the cord without using more force than I thought desirable. I waited some time, and, finding neither pains nor hæmorrhage, left her, with directions that I was to be summoned if flooding occurred. I watched her carefully; no untoward symptom presented, and on the 24th, the third day after the expulsion of the fœtus, the placenta was expelled during defecation after the action of a dose of castor oil. This was attended by the expulsion of a few ounces of blood, and the patient made a most satisfactory recovery.

In this case I acted upon the advice of Dr. Blundell, than whom a more sagacious accoucheur never lived, who says: "If the placenta be retained, and the hand cannot be carried up so high as to command the placenta, *without the risk of bruising or lacerating*, leave it in the uterus; not because it is *not* an evil to leave it there, but because to leave it in the uterus is a smaller evil than to abstract it with violence, and we had better abide by the smaller evil than expose ourselves to the greater evil of lacerating, bruising or killing." See Blundell's Midwifery, edited by Dr. Severn, p. 407.

I am, Sir, yours obediently.

J. B. Carter, M.R.C.S.

Potter Newton, near Leeds, Sept., 1860.

ARMY MEDICAL DEPARTMENT.

To the Editor of The Lancet.

Sir,—The ability which vindicates the best interests of a noble profession is so conspicuous in your columns (ever ready to support that which is just, or expose that which is corrupt or false), and has taught so many of us to regard The Lancet as the champion of our privileges, the upholder of the Magna Charta of our professional liberties, that, invested with this character, I am induced to trespass on its pages; or should my communication be too bulky, I submit its subject to your better consideration and management, anxious only that a matter of so much importance may receive the attention it deserves.

Much has been lately said and written concerning the advantages conferred on the officers of the Army Medical Department by her Majesty's Royal Warrant of 1858; and undoubted and highly valued as those privileges are, you will be, perhaps, surprised to learn that amongst those (a very large section of the department) who have served here during the late campaign, and who are serving at present, it has produced only a spirit of discontent which, if it slumbered at first, is now very vigorously and actively awake. The word of promise has been spoken to us with the lip, but broken to the heart, and an evil spirit been raised by the cold and jealous reception which that acknowledgment of valuable services has met at the hands of military authorities.

That the medical service has been ever watched with a cold and narrow minded policy, I refer you to Sir J. Outram's amalgamation minute to prove; but that policy, unjust as it was, is but a trifle to the fervid jealousy which now scowls at the privileges her Majesty's Warrant has conceded to us: the outward symbols of higher rank, the military honors, the precedence, are all terrible innovations upon old usages. In no single instance within the not narrow circle of my own knowledge have we received the congratulations of our military colleagues; and in no instance have the privileges been willingly recognised. We have shed our blood, we have saved the lives of our brother officers, we have dressed their wounds in action, we have shared the hardships and dangers of the late campaign; but we have still failed to dissipate that illiberal feeling which now separates the "combatant" and the "non-combatant" officers by a gulf as deep as ran between Cavalier and Roundhead of old. The clouds and darkness of antique prejudice still move over the military horizon.

Much, however, of the feeling to which I at present allude is, I have no doubt, due to the arbitrary tone and bearing assumed towards us by the late Commander-in-Chief. Of this, the public abuse of medical officers before their patients at Lucknow, the non-recognition of her Majesty's Royal Warrant, and the quinine order, are examples. Why, Sir, nothing more unjust or untrue than the last ever sprang from the womb of bigotry. Let me bring to your notice the phraseology of that Order—*ex uno disce omnes*; a far-fetched and depreciatory title, which ignores the rank of the officer, is applied—"Regimental Doctor," the barrack-room expression Does his Excellency forget that since the time he entered the service, with advancing civilization, that the medical profession has ever marched with the foremost rank in literature, in science, and, I may say, art? Does he forget that there is as brilliant a difference between the highly educated medical officer of the present day and the leech or barber chirurgeon (to whom his memory seems to cling) as between those rewards by which he has himself recently become ennobled, and the choral chant or frantic war dance which welcomed back the half-clad but victorious Highland cateran?

Having said that discontent exists in the department, I think I have shown it as some ground to stand on; but a far more serious question is, How far will its existence affect and influence the public service? The new system of medical *régime* can only be effectually carried out when the commanding officers and surgeons unite in cordial and harmonious action; any antagonistic feeling at once clogs and deranges the new machinery. With enlarged privileges, fresh demands and higher responsibilities have been imposed on medical officers, whose duty it now is to exercise a rigid surveillance over the whole internal economy of their regiments—a surveillance, in fact, over the command of their own commanding officers; they are to watch the drills, the duties, the dress, the amusements—in short, every particular connected with the soldier's life; to advise alterations, suggest improvements, if necessary report to the medical superior the fruitlessness of their efforts. This is surely, even where there are no conflicting interests at play, no very enviable position; but what is it when, without any independent power of his own, the unhappy surgeon is left dependent for his own personal comfort, as well as for the effective carrying out of his hospital arrangements, on the commanding officer alone, who can refuse his application for leave, who reports on him confidentially to the military authorities, who can waste his time by parades, and interfere with hospital arrangements—who, in fact, for good or evil, is all powerful? How then stands the medical officer if he conscientiously does his duty? Is his position a fair one? As long as human nature is human nature, can he always avoid collision with his commanding officer, who views everything from a different point of view, and under a different coloring? Discipline *versus* sanitation. Why, you might as well tell me to poke the fire with my fingers without burning my hand as to avoid getting into hot water with the military authorities, in whose hands all power and patronage are held. Here is no fictitious example. The surgeon says, "Sir, so-and-so, in my opinion, is prejudicial to the health of the men." Answer—"Sir, in my opinion, it is not." Well, if you are young, foolish, and conscientious, you may think it your duty to appeal officially to your medical superior. He, however, is probably too wise to press the matter strongly on his own military superior, or if he does, the chances are that the second military authority sees it in the same light as the first, and perhaps naturally enough. The result is that you are snubbed or reprimanded for interfering; and you may perhaps find that a few days after the hospital sergeant, whom you have with much labor just drilled into efficiency, is required in the ranks.

Such, Sir, is one of the difficulties which environ the "regimental doctor;" not that I mean to assert its universal operation. There are many commanding officers of high character and most liberal and enlightened views, who, cognizant of their grave responsibilities, devote themselves with ardent zeal, with high and cultivated intellect, to the moral and physical welfare of their men. With such, and there are many, it is an honor and privilege to serve; but alas, Sir, there is no system which ensures such efficiency in commanders; it is a mere matter of chance. But this letter has grown to an unusual length, and though there are many other important topics well worthy of consideration, and many openings for improvement, I will for the present conclude, perhaps again to recur to the subject should it be deemed important enough to occupy your valuable columns.

Your obedient servant,

MACHAON.

Bengal, Aug, 1860.

RAMBLING WORDS ON ARMY MEDICAL OFFICERS.

To the Editor of THE LANCET.

SIR,—No men of fortune or, probably, of comparative independence, or men capable of influencing the destinies of the nation, do, or ever will, enter the British Army in the capacity of medical officers.

Medical men in the Army are a class by themselves, generally men who before have seen little of the world; they are civilians clothed in the garb and living in the society of men of war, but their thoughts and ideas are, or ought to be, about healing, not killing, although doubtless they do the latter now and again. Sometimes, however, he of the lancet thinks himself, although not allowed, nearly as much entitled to draw the sword, and wear the sash, as the combatant officer; forgetting that academical honors are his, rather than those of chivalry. Many may think this a hard pill to swallow; however, let them answer themselves whether it is true or not.

Strange indeed are medicos in their ideas. Almost all suffer from a species of ill-defined jealousy with regard to the officers with whom they come in contact. Some attempt to bluster; it may make one smile, but still it is so. Others are painfully sensitive and retiring. Some remain uncouth, either good-hearted, or puffed up with no small opinion of their consequence; others remain gentlemen, generally somewhat subdued. In fact, the effect of the training—to obey, serve, and to a slight degree resist, but never to command—is seen in different temperaments.

From what has been said above, it will be seen that the position of a medical officer is anything but enviable. He gives up his civil rights, and knows about military matters, although he associates with soldiers daily, less than a rifle volunteer of one month's standing. He has, after having devoted four or five years to medical study, to serve twenty-five years on full pay before he has a right to retire on half pay, and it may be without a day's relaxation. Sundays and Saturdays are all the same to him, and lucky indeed is he if he manages to get a few months' leave during his total service. Indeed, in vain for him is the public holiday—"Officers in command of regiments are to be very circumspect in recommending leave of absence for the *regimental medical officers.*"—(*Queen's Regulations*) If on the staff, he may have to proceed to England's furthermost dominions without bidding good-bye to friends. If with a regiment when it receives orders for foreign service, let him not think he can, as other officers, run to town and see after outfit for voyage. No, he cannot be spared; red-tapeism probably keeps him at returns; and when he obtains a breathing time after embarkation, he may have difficulty in finding a cabin suited to his so-called relative rank. Weary, toiling man for twenty-five years!

With regard to a combatant officer and a medical officer, let no comparison be made. The former is generally a married man, the latter scarcely ever. The one can sell if he has purchased, or, if not, serve until he can; the other cannot. One fights and gains military glory, and if he has talent may proudly command; the other does neither. Their professions are different.

Compare the case of a private soldier with that of a medical officer. The private enlists, say at seventeen years of age; the medical officer joins at twenty-five years of age. The former retires after twenty-one years' service with a pension—i. e., at thirty-eight years of age; the latter after twenty-five years, irrespective of his previous medical studies, say five years—i. e., at fifty years of age, or twelve years longer service than the private, whose condition both in health and sickness is his constant care. And mind you, a man of fifty years of age, that for twenty-five years has had no relaxation, and seen changes of climate, is indeed old. His health is probably broken up, and his latter years are dragged out in lonely misery. Truly no adequate compensation is there for his former slavery—for what else can it be called.

What a boon would it not be to medical officers if they knew that they could retire with an allowance after twenty years' service! They would serve cheerfully, and look forward with hope. Why is it withheld from them? The nation can afford it, and the service, for more reasons than one, would profit by it.

So end my rambling words, IMPROMPTU.

P.S.—It must not be understood from these "Ramblings" that honors for actions of bravery in the field done by medical officers want to be withheld, nor have they, as Victoria Crosses proclaim; but that academical honors are more in their way than military ones. A good surgeon, of all men, must be fearless.—I.

THE PREVENTION OF ACCIDENTAL POISONING.

To the Editor of THE LANCET.

SIR,—I perceive that you call attention to the advantage of employing bottles with contracted necks, and of a quadrangular fluted configuration, in storing and dispensing all poisonous or potent medicines of which the dose is a teaspoonful or under. Although that article and the subsequent correspondence to which it led have been elsewhere reprinted, and produced considerable sensation, I am not aware to what extent the changes which you advocate may have been adopted.

A patient of mine nearly poisoned himself last week by an error which your suggestion would have prevented. He was supplied at a first-rate dispensing establishment at the West-end with a solution of iodide of potassium which I had ordered for internal use, and a solution of atropine to be applied to the eye. They were dispensed in similar bottles, and in a moment of hurry he poured out for himself a dose of the solution of atropine, containing about one-sixth of a grain. He became insensible, and owed his ultimate recovery very much to the energy of Dr. Halford, who was at hand. Had the solution of atropine been furnished to him in an angular, fluted, narrow-necked bottle, he would have felt on grasping the bottle that he was handling a lotion for external use; and if this had not aroused him to a sense of error, he would have been still further warned of his mistake by finding that the solution dropped slowly from the bottle.

I am, Sir, your obedient servant,
AN HOSPITAL SURGEON.

September, 1860.

TREATMENT OF MENORRHAGIA.

To the Editor of THE LANCET.

SIR,—Will any of your numerous readers inform me of the best treatment for immoderate flow of blood at the menstrual period? The disease I allude to is of very frequent occurrence, and gives rise to all the symptoms of anæmia. Theoretically one would suppose that small doses of ergot of rye during the flow, conjoined with rest and steel and quinine in the interval, would be of service; but I have found this treatment fail entirely in many cases, and I shall therefore feel most grateful for any hints on the best mode of checking a disposition on the part of the uterus to lose too much blood at the menstrual period, depending, I presume, partly on the state of the blood itself, and partly on atony of muscular fibre.

Your obedient servant, OBSTETRICUS.

Lewes, Sussex, Sept. 1860.

TREATMENT OF MENORRHAGIA.

To the Editor of THE LANCET.

SIR,—If my experience in the treatment of the above will be of any service to your correspondent, "Obstetricus," who asks advice upon that point, he is quite welcome to it.

I have attended in my practice numbers of cases of the sort, some mild and some severe. One case I recollect well was a young lady at Skelton, in Yorkshire, aged nineteen, single, which gave me very great trouble; but at last, by continued perseverance, I controlled the discharge, and ultimately made a cure. I need not name all the remedies which I tried. Suffice it to say that the drug which did *all* was gallic acid, in five-grain doses three times a day. Under this treatment I do not remember one case having failed. It is only just to the gentleman by whom I first saw this drug administered to mention his name, as I was then his visiting assistant for three years. It was W. Braithwaite, Esq., Editor of the "Retrospect of Medicine," at Leeds. I remain yours truly,

GEORGE SELWYN MORRIS, M.R.C.S.

Tottenham, October, 1860.

To the Editor of THE LANCET.

SIR,—In reply to your Lewes correspondent "Obstetricus," I think if he will have recourse to the gallic acid, in five-grain doses three times a day, *during* the menstrual flow, conjoined with perfect rest in the horizontal position, and administer small doses of extract of nux vomica, strychnine, or quinine with hydrochloric acid, *between* the periods, for the better improving the muscular tone of the uterus, he will be gratified to see its salutary effect and his patient's marked improvement under this plan of treatment, if properly and carefully carried out. I shall be pleased to hear that it has proved as successful in his hands as it has in mine for some years past.

I remain, Sir, your obedient servant,
ROBT. B. NEWHOUSE, M.R.C.S.
Birmingham, October, 1860.

ON SAVING CROPS OF CORN IN WET WEATHER.

WE extract the following letter from *The Times* of Tuesday last:—

"*To the Editor of The Times.*

"SIR,—Allow me to suggest in the columns of *The Times* a new application of mechanical power with a view to the saving and preserving of ripe crops of corn and other vegetable products. At the commencement of last week the accounts from all parts of the kingdom with regard to the harvest were dreary and alarming. Having long been of opinion that mechanical means, which have been so liberally and skillfully employed by our agriculturists for producing crops, had not been adequately used for saving them when produced, I determined, if it were possible, to get a drying-machine manufactured for the purpose of experiment. Accordingly, on Wednesday last, I consulted Mr. Savage, engineer, of Eastcheap. I explained to him that my object was to cut and dry sound ripe corn, whatever might be the fall of rain. To attain that object I proposed that after being cut the corn should be received under cover, and, where the premises were sufficiently capacious, the sheaves should be subjected to the action of a drying-machine, worked either by hand, horses, or steam; that the ears only, separated from the stalks by being drawn through inverted metallic combs or hackles, might be so treated. Mr. Savage is a 'coffee-roasting machine' manufacturer, on a large scale. He considered that the plan I proposed was quite practicable, and, on seeing him again the following day, he stated that the more he reflected on the subject the more fully he was convinced that the proposal could be carried into effect. By this gentleman I was kindly referred to the manufactory of Mr. Lloyd, engineer, of No. 70 Guildford street, Southwark, and also to the office of Mr. Davison, No. 8 London street, Fenchurch street. Having explained to these gentlemen the object I had in view, they both expressed an opinion that the plan was easy of adoption, and might be carried into effect with perfect facility. At Mr. Davison's, the operation of drying different substances had been already accomplished to an extent of which I was entirely ignorant. At Mr. Lloyd's manufactory I found that, by a very simple contrivance, air had been driven through a machine, under the influence of a six-horse power, to the extent of 10,000 cubic feet a minute. Here was a corn-drying machine, with some trifling additions, already made. At Mr. Davison's, in London street, I saw the model of a desiccating machine, manufactured and used by that gentleman. I found that he employed such machines for roasting coffee, cocoa, and chicory, and drying flax, cloth, feathers, malt, wood, and even bricks; but not one of them, strange to say, had ever been used for drying corn, either 'in the sheaf' or 'in the ear.' The drying powers of these machines appear to be almost fabulous. Mr. Davison stated that he could evaporate from wet substances as much as four tons of water in eight hours. He does not entertain a doubt that these machines may be used with extraordinary results for the drying of ripe corn, wet from the field. In his machines artificial heat may or may not be used. Mr. Lloyd, of Guildford street, Southwark, is a 'fan-blowing machine' manufacturer. The machine that I saw at his premises, through which, by a six-horse power, he could propel 10,000 cubic feet of air per minute, occupies a space of only five feet square, and its cost would be about £40. Having advanced thus far in my inquiries, I determined on consulting Mr. Alderman Mechi, to whose ability, energy, and enterprise the public are so deeply indebted for a vast number of improvements in agriculture. I saw that gentleman on Friday last, and in less than five minutes he pronounced the proposed plan not only practicable, but highly useful and important. The Alderman remarked that wind is an excellent dryer, and added, 'At my farm yesterday we had one of your machines on a grand scale; we had a brisk breeze, and consequently carried a stack of wheat.' On my leaving Mr. Mechi he stated that he should at once go and see the instruments I had mentioned.

"That drying-machines may be used beneficially for other purposes than saving crops of corn is quite obvious. During the last winter thousands of tons of mangold-wurtzel and turnips rotted after they had been stacked, housed, or caved. A similar destruction may be prevented in future by subjecting these valuable productions in autumn to the drying process. Possibly the decay of potatoes may be prevented in the same manner. Within a few years it is, I think, probable that the application of mechanical power and skill with a view to the saving of ripe crops of corn or the preservation of other vegetable substances in wet weather will be generally adopted, when necessary, throughout the kingdom.

"Permit me to observe that I have no interest whatever in this question except as one of the public, and that the engineers whose names I have mentioned were never seen by me until I consulted them last week.

"I have the honor to be, Sir, your obedient servant,
"THOMAS WAKLEY.
"Reform Club, Oct. 3rd, 1860."

SPONTANEOUS REDUCTION OF PROCIDENTIA UTERI WHICH FOR FIFTEEN MONTHS HAD REMAINED IRREDUCIBLE.

To the Editor of THE LANCET.

SIR,—In the belief that the peculiarities of this case, which occurred in my pauper practice, may be of interest to your readers, I beg to transmit the following account of its principal features:—

Mrs. M——, aged forty-six, an anæmiated-looking person, wearing the aspect of one who had experienced very protracted suffering, was admitted into the hospital on the 3rd of August. Her menstrual periods are not characterized by any peculiarity, with the exception of an occasional postponement of the anticipated flux. Sixteen years ago, after a very tedious labor, she was delivered of her only child.

About two years since, she began to experience, without any assignable cause, dragging pains in the loins, and her notice was soon attracted by a tumour, which, on any violent succussion of the body, as in sneezing, could be forced externally, but in the recumbent state retained its position within the vagina. About fifteen months ago, her attempts at reduction proved unavailing, and since that period the uterus has maintained its external relations, its growth increasing visibly during the last three months, occasioning considerable difficulty in micturition, and profuse leucorrhœal discharge; the dimensions of the tumour are those of an ordinary-sized orange, somewhat oval, but less broad at the base than the apex, where a transverse slit, surrounded with superficial ulceration occupying the area of a crown-piece, denotes the os tincæ. The mucous membrane has altogether lost its ordinary characteristics, by conversion of the mucus into cuticular epithelium; and the vaginal walls are much hypertrophied. The perinæum is quite sound, and the vagina and soft tissues lax and easily extensible. The mass was acutely sensitive, and, as moderate pressure was only the occasion of considerable pain, I soon desisted from any very decided attempt at reduction. Two days subsequently, half a dozen leeches were applied to the uterus, and tonics prescribed. With the exception of the inconvenience of restraint and distressing palpitation of the heart, matters proceeded favorably till the 24th, when I was hastily summoned, and found my patient laboring under complete retention of urine. She remarked to me that, in the agony of her sufferings, she had experienced a sense of the tumour "slipping up." On examination, I discovered partial subsidence of the swelling, and the abstraction of upwards of six pints of urine effected its complete disappearance within the vagina. Her gratitude since this occurrence has been unbounded, as this restoration of parts to their normal position has dissipated the lumbar and uterine pains which for fifteen months have annoyed her extremely. Were it not for the distressing palpitation dependent on organic disease of the heart, she would be in a fair way to recovery, as the uterus has since remained *in situ*, and in no way inconveniences the patient.

No doubt the effect of the hyper-distended bladder, in its expansion acting through its intimate connexion with the uterus, was to raise this organ, in which the process of involution had been encouraged by the local depletion, and the rest rigidly enjoined. It is not, however, the less surprising that tolerance should be so speedily acquired of the return to a position to which, though primarily natural, the pelvic organs had become by the lapse of time dishabituated.

I remain, Sir, yours, &c.,
FRANCIS E. CAREY, M.D.

Gurnsey, Sept. 1860.

POISONING BY ACONITE.

To the Editor of THE LANCET.

SIR,—I send you the following account of a case of poisoning by aconite which has lately occurred in this neighborhood. It may prove interesting to many of your readers, as forming a fresh instance of an error which has been committed more than once: I mean that of mistaking aconite-root for horse-radish. In the present case, about a pound of the root of aconitum napellus was cut into slices and mixed with a gallon of pickles. A young married woman, who partook of them the next day, was seized, within ten hours of the meal at which they were eaten, with violent spasms and severe pains, with pricking sensation in the limbs, back, and chest, difficulty of breathing, and partial loss of sight; the pulse was considerably lowered, and the skin cold and clammy. Chloric ether and ammonia were given in full doses, and in an hour or two the patient rallied. The cause of these symptoms was unexplained until the following day, when three other members of the family, (namely, the mother, sister, and brother,) within an hour of having again eaten some of the pickles, were attacked in a similar manner. The mother was only slightly affected, but the brother and sister, especially the latter, who had taken a large quantity of the vinegar, suffered much more severely. These two patients were made to walk about; emetics were freely administered, and large quantities of brandy, ammonia, and chloric ether were given at frequent intervals; mustard poultices were applied to the chest and back of the neck, and hot water bottles to the soles of the feet. Galvanism, by means of a Pulvermacher's chain, was also employed over the region of the heart, in the case of the sister, whose pulse was at one time imperceptible. Fully twelve hours elapsed before this patient could be pronounced out of danger. The symptoms were much the same as in the first case, but in a more aggravated form, opisthotonos and trismus being very marked. They are now all gradually recovering their usual health, though for some days they complained of great pain and tenderness in the region of the spine, together with loss of sleep and appetite.

Hoping that, for the rarity of similar cases, this rough sketch may be worthy of a place in your valuable columns,

I remain, Sir, yours obediently
JOHN BARR BROWN, M.R.C.S.

Sunninghill, Berks, Sept. 1860.

A SANITARIUM FOR INDIA.

To the Editor of THE LANCET.

SIR,—As I have now been for four years in medical charge of the Bengal Cruizing Station at the Sandheads, and as much has been lately mooted with regard to its advantages as a sanitarium, and as I believe so little is generally known on the subject, I thought it might be interesting to some of the readers of THE LANCET—to which I am a "constant subscriber"—to hear of its actual capabilities. I have therefore taken the liberty of forwarding the following particulars:—

The Bengal Pilot Establishment at the Sandheads, the cruizing ground of which is from thirty to forty miles to the S. and S. W. of the island of Sangor, is the last land visible on leaving the river Hoogly, so that the pilot brigs are constantly out of sight of land. In the N.E. Monsoon, which is the fine weather, and which commences in November and ends about the latter end of April, invalids often come from Calcutta for a change, and experience much benefit from the sea trip. In the S.W. Monsoon, the weather is very rough, and the vessels consequently are uncomfortable for invalids, excepting for those who are accustomed to exposure.

Sea-bathing is particularly beneficial to some convalescents, and the manner in which it is applied is as follows:—There is a small canvas house or tent fitted up, which is perforated at the top, so as to form a shower bath by the sea water being poured in by natives attending for that purpose. This arrangement cannot, however, be rigged in any but moderate weather.

The officers of the Bengal Marines are generally in the enjoyment of good health, excepting the occasional occurrence of diarrhœa, dysentery, and fever contracted by exposure to the weather and tropical sun, and various other causes accruing from the arduous nature of their profession.

Amongst the natives forming the crews of the different pilot vessels under my charge, frequent cases of disease occur. Intermittent fever is by no means uncommon, and, what may appear strange, it generally breaks out toward the end of each trip, or when the vessels have been at sea for two months, and not when the men are actually exposed to miasmatic influence in coming down the river, as in such cases the zymotic poison appears to lie dormant until by fatigue and exposure to the weather the greater part of the crew are brought into a state of impaired tonicity, when it shows itself in various diseases of a low type.

I am, Sir, your obedient servant,
Roderic O'Conor,
Medical Officer in Charge of the Bengal Cruising Station, Sandheads.
August, 1860.

VERSION WITHOUT INSERTING THE HAND IN THE UTERUS.

To the Editor of The Lancet.

Sir,—The two communications of Dr. Braxton Hicks, published in The Lancet,* descriptive and illustrative of "a new method of version in abnormal labour," induce me to send you the details of the following case:—

On the 28th of January, I was summoned to attend Mrs. ——, a farmer's wife, in her third confinement. On my arrival, I ascertained she had been in labour for several hours. The pains were strong, and occurring at regular intervals; the os I found dilated sufficiently to admit the forefinger; the membranes were entire. The presenting part I had little difficulty in making out to be the left shoulder, in what I considered the first position. The slightest pressure on it with the finger caused the child to recede considerably, showing the liquor amnii to be abundant. Having now determined that the case could not with safety be left to nature, I resolved upon having recourse to the operation of turning; but as the time for its performance had not yet arrived, I was content to remain some time longer passive, at the same time avoiding giving a direct answer to my patient's earnest inquiry if all were right, for I knew I should encounter many difficulties were she apprized of the abnormal position of the child. On again making an examination, I found matters as I had previously left them, with the exception of the os, which had expanded to the size of a half-crown piece, and would, if required, admit with little difficulty the whole hand.

From the very great facility with which the fœtus could be raised and moved about, it occurred to me that its position might be improved without either introducing the whole hand or rupturing the membranes—in short, that it might be possible, without having recourse to either expedient, to bring down the head into the brim of the pelvis, so as to convert the case into a natural presentation. With this object in view, I endeavored to raise up the presenting part with two of the fingers of the left hand, while with the right I made steady pressure upon the head in the direction of from left to right. In a very short time the shoulder began to recede, but only to be replaced by another part of the child. The head could now be felt approaching slowly the mesial line. The external pressure was continued, while the fingers of the left hand were employed in guiding the head towards the pelvic brim, into which, before I had withdrawn the hand, it had entered. The case, being now converted into a natural presentation, was left to nature. In course of time a fully developed and healthy male child was born. The whole operation was completed in less than five minutes, and without the knowledge of the mother—a matter of no small moment in the present instance. No doubt this mode of version was greatly favored by the peculiar circumstances of the case; and, although it may be applicable in only a very few, it seems to me by far the safest both to mother and child.

I send you the above observations, which show, as I think, that some cases of malposition of the head may be remedied according to the "new method" without causing the child to perform a complete evolution, in the hope that others may be induced to record their experience on the subject, so that a proper conclusion may be arrived at regarding the merits or demerits of the "new method of version."

I remain, Sir, yours faithfully,
David Easton, M.D.
Stranraer, Wigtonshire, Sept. 1860.

To the Editor of The Lancet.

Sir,—I think the following case so fully confirms the value of the method of turning described by Dr. B. Hicks, that I beg its insertion in your journal.

Early on the morning of July 24th I was summoned by a midwife in this neighborhood to go over to Woking to see a young woman under her care, and who was in a dangerous state from flooding. I found the patient, a delicate person, aged twenty-eight, in labour with her fourth child, in a most critical condition; face and lips pallid; extremities cold; pulse 140, small, and tremulous. She had had only three slight pains, but had lost a large quantity of blood. I found the vagina filled with coagula; the os uteri dilated to the size of a crown-piece, and entirely blocked up by the placenta. On passing two fingers between the wall of the uterus and the placenta, I felt a cephalic presentation, the membranes being unruptured. Knowing that no time must be lost, I determined on trying the plan of version suggested by Dr. B. Hicks. With my two fingers I made steady pressure on the head, while, with my left hand placed on the fundus uteri, I bore down the nates by gentle impulsive pressure. The head at once receded, and in two or three minutes I felt a foot presenting. Rupturing the membranes, I seized it, and directly afterwards the other; and, with a little firm traction, brought the breech down into the cervix. I now waited, and gave brandy and gruel. My patient said she had scarcely felt what I had done to her, and appeared more comfortable. In ten minutes there was a slight pain, when I delivered her of the child (still-born); the uterus contracted freely, and in five minutes I removed the placenta, no hæmorrhage following. The patient remained in a rather alarming condition for some hours, but, by the use of stimulants, &c., gradually rallied, and has since entirely recovered.

I believe that the patient was saved much distress and pain, and that the shock to the system was greatly diminished, by my not being obliged to pass my hand entirely into the uterus; and further, had I done so, I must have separated a larger portion of the attached placenta, whereby there would have been more hæmorrhage, which she could not have borne. To me it has been a most satisfactory case, and I think it bears strong testimony to the value of the method.

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* *Vide* October No. p. 282.

I am, Sir, your obedient servant,
H. SHIRLEY.

Ripley, Surrey, Sept. 1860.

POST-PARTUM HÆMORRHAGE.

To the Editor of THE LANCET.

SIR,—Will you allow me to suggest to those who may be interested in the discussion on "post-partum hæmorrhage," which has recently occupied a place in your columns, one or two methods of treating such accidents, that so far as I am aware have not been hitherto employed, and which I conceive worthy of attention.

With a view of correcting the predisposition to hæmorrhage, improving muscular tone, and thus increasing the chances of efficient contraction of the uterus after delivery, I would propose that small doses of strychnine or extract of nux vomica be administered twice or thrice daily some short time prior to parturition. To arrest bleeding and promote contraction of the womb, the injection of a cold infusion of ergot of rye, and in alarming cases, where other and more convenient means have failed, I would recommend the following mode of applying electricity: Let the negative pole of an induction apparatus be attached to the arm or elbow of the accoucheur, while the positive pole armed with a wet sponge is applied either over the fundus uteri or directed to the spine. The hand of the operator should now be introduced into the uterus, and the machine set in motion. The current enters at the fundus uteri, and passing through the hand and forearm of the operator, completes the circuit at the negative pole. The action should be kept up some time, and gradually increased, the accoucheur directing with his fingers a stream of electricity to the various portions of the internal surface of the womb until contraction ensues, and the hand be expelled.

When we reflect that electricity possesses the power of causing violent muscular contraction some hours after death, it is difficult to imagine a case where the stimulus of the "galvanic hand" would fail in producing such salutary effect in the living subject, if properly and carefully applied.

I am, Sir, your obedient servant,
CHARLES TAYLOR, M.D.

Walton, near Liverpool, Sep. 1860.

To the Editor of THE LANCET.

SIR,—May I be allowed to offer my experience on the prevention of post-partum hæmorrhage. My plan in every obstetric case is, whether I anticipate post-partum hæmorrhage or not, to apply a shawl, folded cornerwise to about three or four inches wide, round the abdomen prior to the expulsion of the child, that it may be in readiness. As soon as the child is expelled, the shawl is tightened as far as the patient can bear, by straining the ends in opposite directions, and suddenly twisting them *exactly* over the uterus, and tucking the twist under, so that it might form a kind of tourniquet pad pressing on the womb. I prefer this way of fastening the shawl to *tying* anything round the patient—first, because a greater amount of pressure can be more easily attained; secondly, when properly twisted, the shawl never slackens; thirdly, a most effectual pad is at once at hand.

I have attended more than 1000 obstetric cases during my practice of twenty-two years, and never had the misfortune to lose a single case from post-partum hæmorrhage, which I mainly attribute to not overlooking this simple plan of prevention. My father, too, adopted this plan during his thirty-two years' practice with equal success.

I am, Sir, your obedient servant,
H. B. CURTIS, M.R.C.S.

Paulton, Sept. 1860.

To the Editor of THE LANCET.

SIR,—No complication attending on a case of midwifery can be more embarrassing to a junior practitioner than hæmorrhage after delivery; and the publication of papers or letters on the subject is an incalculable boon to those practising midwifery at the commencement of their professional career. To combat a case of the kind requires knowledge and presence of mind; the former added to experience (if he has had practical advantages), being the foundation through which the young practitioner has the latter at command, and by it he can quickly devise the best means of checking the loss of blood. That many of the more common established rules are of no avail in particular cases must have come under the notice of most of us; and any suggestions suitable to these occurrences are valuable to every beginner.

Hæmorrhage is produced through the want of uterine contraction, and may follow a very precipitate labour, and result from the organ being exhausted through the strong and rapid contractions on the fœtus and placenta; or a slow and exhausting confinement may be terminated by the expulsion of the normal contents of the uterus, and no further contractile power be left to close the uterine sinuses, relaxation taking place and consequently hæmorrhage. We are not able to explain the reason why, at the expiration of a certain period, an action should be set up in the uterus causing it to contract on what at that time must be considered a foreign body; but we all, by experience, know that the uterus will contract, and that, if strength of constitution still remains, contraction will continue until all foreign substances are removed from it.

Two facts should be in the remembrance of every junior practitioner during a case of post-partum hæmorrhage,—viz., the causes and the result: the causes being exhaustion of the uterine fibres for continued contraction from loss of nervous force, or a want of sufficient stimulation to call their enfeebled powers into action; and the result being a patulous condition of the uterine sinuses allowing of either internal or external hæmorrhage (we discard hæmorrhage following rupture of the cervix). The object of the medical attendant is to excite quick and complete contraction of the uterine parietes so as to close the open vessels, or to mechanically prevent further loss of blood until new vigor is established; and to stimulate the uterus many practices have been called into request, such as the use of ergot, putting a child to the breast, cold-water injections, and the introduction of the hand conjointly with external manipulation, &c. But even these have failed to rouse the organ, so exhausted from its long-continued struggles or precipitate action, and mechanical agencies are requisite to stay the loss of blood; and in this case the simple application of Dr. Slyman seems to answer every purpose. This consists of two large bladders connected together by a flexible tube; one bladder is filled with ice-cold water, and the other introduced into the uterus; pressure is made on the full one, and the water being forced into the other, renders i a most efficient plug for the uterus, and at the same time stimulates it, not only by its presence as a foreign body, but also through the contact of the cold water contained in the bladder. The uterus being filled artificially, little or no bleeding can occur; and when contraction takes place, the water is forced into the external bladder as gradually as the action of the organ is excited. This simple contrivance having fulfilled its office, the abdominal bandage, over a pad, is tightened to prevent relaxation; and then stimulants may be cautiously administered internally to raise the debilitated system, whether resulting from loss of blood or caused by a long and exhausting labor.

I am, Sir, yours respectfully,
Wm. D. Slyman, M.R.C.S.
September, 1860.

To the Editor of The Lancet.

Sir,—If you can allow space for another communication relative to the treatment of post-partum hæmorrhage, I will venture to give you my experience as to the quickest, safest, and most effective mode of practice.

Much has been written on kneading, plugging, emetics, ice, &c., none of which I think can be fully relied upon, but I have always succeeded by the simple plan of injecting about half a pint of very cold water (iced if you can get it) into the rectum, giving at the same time cold brandy-and-water, with a drachm of Curtis's liq. secalis cornuti in it. There is less difficulty in this operation than in injecting the uterus, which, I imagine, when attempted, is not always done. The application of the infant to the breast frequently fails to produce the desired contraction. I invariably carry in my midwifery case a small elastic enema instrument.

I am, Sir, your obedient servant,
P. Hubbert, M.R.C.S.
Croydon, September. 1860.

News Items, Medical Facts, &c.

Cold versus Heat.—The annual deaths by cold and by burns in this country follow a curious law of progression when their frequency is compared with the temperature of the year. Thus the temperature of 1855 was low, and in that year deaths by cold amounted to 195, and deaths by burns and scalds to 3177; and in the year 1857, the temperature being high, the deaths by cold did not exceed 45, and by burns 2717. In the four years out of nine when the annual deaths by cold exceeded 100, the deaths by burns and scalds were 2826 on an average; in the four years when the annual deaths by cold were less than 100, the deaths by burns and scalds were 2710 on an average. The additional fires in cold weather, and the disposition to approach them without due caution, sufficiently explain this, while they also indicate the importance of applying widely the principle of rendering dress non-inflammable.

Bedouin Arabs.—Figures of a Bedouin Arab and a Female peasant of the Nile Valley have just been added to the Egyptian collection at the Crystal Palace; they are clothed in the costume of the country, and at their feet is a "ballass," or vessel used by the women for carrying water on their heads from the Nile.

The Brittleness of the Moulded Nitrate of Silver.—Dr. L. Smith, of Louisville, U.S., lessens this brittleness by adding to the salt some chloride of silver, which does not interfere with the usual properties of the nitrate.

Smoking and its Effects.—The pupils of the Polytechnic School in Paris have recently furnished some curious statistics bearing on tobacco. Dividing the young gentlemen of that college into groups, the smokers and the non-smokers, it is shown that the smokers have proved themselves in the various competitive examinations far inferior to the others. Not only in the examinations on entering the school are the smokers in a lower rank, but in the various ordeals they have to pass through in a year, the average rank of the smokers had constantly fallen, and not inconsiderably, while the men who did not smoke enjoyed a cerebral atmosphere of the clearest kind. It would be interesting to pursue this plan of statistical inquiry in our public schools and universities. Perhaps smoking is in many instances not the cause but the effect or indication of intellectual mediocrity. Is there any connexion between smoke and German metaphysics?

M. Jobert's Method of treating Stricture.—The *France Medicale* of the 11th ult. contains a clinical account of M. Robert de Lamballe's practice, at the Hotel Dieu of Paris, in the treatment of stricture. The French surgeon's opinions are rather sweeping, as he condemns pretty well every mode of treatment save his own, which is described as follows:—Take an emplastic bougie, and soften the extremity at the flame of a lamp; then incorporate more or less alum with it, according to the effect you wish to produce, and gently carry down the instrument to the seat of the stricture. There leave it a quarter of an hour. After two or three applications (the intervals are not mentioned), inflammation of the mucous membrane and discharge follow; the canal becomes disgorged by this transitory catarrh, and a bougie with an olive-shaped extremity passes easily. The case quoted in support is in nowise conclusive, and we must submit that the alum incorporation does not seem to us to present any advantages—rather the contrary. This practice of M. Jobert somewhat resembles the new mode of treating gleet in Paris, alluded to by our own correspondent; but practitioners will probably require good proof that these methods are really efficacious, and that they produce no mischief, before they have recourse to them.

Graduated Types for Trials of Vision.—M. de Jaeger, jun., has just published at Vienna the third edition of the above pamphlet, which has recently been translated into French. It consists of twenty proofs of different types, commencing with the largest (No. 20,) and descending by a gradually diminishing scale to the smallest (No. 1), in English, German, and French. The book is extensively used by oculists in Germany as the amount and kind of vision can at once be described by it. When, for instance, a person is said to read No. 8 at so many inches' distance, and to be able to read for a determined time without fatigue, a very accurate idea is given of the patient's power of vision.

Lord Byron's Foot.—Models of the feet of Lord Byron have been this week deposited in the Museum of the Nottingham Naturalists' Society. They are described as about nine inches long, narrow, high at the instep, and generally of symmetrical shape. In an accompanying affirmation, it is stated that the deformed foot (the left) was not, as has been generally stated, a "nub" foot, but that it was formed symmetrically as the other, being, however, exactly an inch and a half shorter. The ankle was weak, and the foot turned outwards. To remedy this it states that Lord Byron wore a very thin boot, tightly laced, under his stocking; and in early life employed an iron, with a joint at the ankle, passing down the outside of the leg, and fastened to the sole of the shoe. The muscles of the calf were atrophied.

The Cholera in Spain.—The "Siglo Medico" of Madrid contains an article which shows that the cholera has regularly broken out every year in some part of Spain since 1854. From the 1st of May to the 29th of June of this year, 5344 cases occurred at Malaga, the deaths being 2267. Many provinces have been invaded, but Madrid has as yet escaped.

John Hunter.—The Council of the Royal College of Surgeons have caused a beautiful memorial tablet to be placed over the site of the grave of Hunter, now resting in Westminster Abbey, with the following inscription :—

"Beneath are deposited the remains of John Hunter Born at Long Calderwood, Lanarkshire, N.B., on the 13th o February, 1728. Died in London on the 16th of October 1793. His remains were removed from the Church of St Martin's-in-the-fields to this Abbey on the 28th of March 1859. The Royal College of Surgeons of England have placed this tablet over the grave of Hunter to record their admiration of his genius as a gifted interpreter of the divine power and wisdom at work in the laws of organic life, and their grateful veneration for his services to mankind as the founder of scientific surgery."

This inscription is deeply cut in brass, of a Gothic design, inlaid in a slab of polished red granite, and presents that chaste and elegant appearance for which the Messrs. Hardman, of Birmingham, who executed the work, are so distinguished. Mr. Weekes, the eminent sculptor, is progressing favorably with the model of the statue, which is to be of marble, and to be placed in the Hunterian Museum, thus to be comparatively buried. Why was not a public site chosen for it? Mr. South, the president of the College, still continues to receive subscriptions towards the foundation of a scholarship (after payment for the statue), in order to perpetuate still more the immortal genius of Hunter. Our transatlantic brethren have already sent a handsome sum to Mr. South, as a first installment towards this desirable project.

A Quack Doctor In Trouble.—At the Dudley County Court on the 25th ultimo, an action was brought by a laborer named Sampson Skinner, and his wife, to recover the sum of £10 from a person who styles himself "Dr. Miller." It was stated that, on the 21st of June last, the plaintiff and his wife went to the herbal establishment of "Dr. Miller" in Dudley, and asked for a pennyworth of Epsom salts. Mrs Miller, in the absence of her husband, gave plaintiff a packet Upon reaching home, Mrs. Skinner dissolved the substance in some water, and proceeded to take it. Remarking a strange taste about it, she asked her husband to taste it also, which he did, and was immediately seized with vomiting. As he had only taken a small quantity, the effect was not very severe. His wife, however, was taken seriously ill, a surgeon had to be sent for, and for some time her life was in danger. The substance given for Epsom salts was found to be sulphate of zinc, a deadly poison when taken in large doses His Honor at once gave a verdict for the full amount claimed, commenting severely at the same time upon the conduct of Miller in leaving such poisons within the reach of persons ignorant of their deadly effects.

The Widow and Orphans of a Doctor.—A very worthy member of the Academy of Medicine of Paris, M. Collineau, has just died in Paris, at the age of seventy-seven. The deceased has left several papers and works of some note, as also the reputation of a very benevolent, kind-hearted man. At the threshold of his career he became the assistant of M. Didie, physician of the St. Lazare prison, and in large practice. Soon afterwards the principal died, leaving a widow and seven children in very straightened circumstances. M. Collineau took charge of the practice and family; the children soon lost their mother also, and found in him a kind father to the hour of his death.

Aged Military Surgeons.—M. Sarey Lachaume has just died at Paris, at the age of eighty-four. He had served, as a military surgeon, in all the campaigns of the first Napoleon, had followed the latter to the island of Elba, and had retired after Waterloo.—The Nestor of French military surgeons, Casimir Legay, had just died at Boulogne, at the advanced age of eighty-four and a half. He had served under Louis XVI., the Republic, and the first Napoleon, and had been engaged in private practice at Boulogne since 1816.

Lunatics in Savoy.—France, in annexing Savoy, assumes also charge of the lunatics, idiots, and cretins of Savoy, to whom the benefits of the enactment, under the French law, concerning the support of persons of deranged mind is extended by two new decrees. The asylum erected at Bassens, near Chambery, received by these decrees the character of a public establishment, and a hundred free places in it are reserved for the most helpless idiots and cretins of the two departments of Savoy and Upper Savoy. A subvention of 40,000 francs is granted for expenses of construction and organization, and for payments of the debts of the public asylum for idiots at Bassens.

Professor Boyer, of Montreal.—This distinguished physician, one of the medical officers of the Hotel Dieu Hospital at Montreal, and Professor of Medicine and Medical Jurisprudence in the French College of Medicine in the same city, has just left England on his return to his native country, after some months' sojourn in this metropolis and the principal capitals of Europe. He has met everywhere with the respect due to his position and standing in the profession and his natural urbanity of manner and kindness of heart. The hospital to which the Professor is attached is the largest in Montreal, and contains several hundred beds; it was founded originally by the nuns, who perform the duties of sisters of charity.

Increase of Lunacy in Ireland.—The certified number of lunatics in Ireland during the last year was 7878, of whom 2898 were private lunatics, and 498 were in receipt of public relief. The number of lunatics relieved during the year ending the 14th of May, 1847, was 2946; whilst the number relieved in the year ending the 14th of May, 1858, was 5564, showing an increase of 2619 during eleven years. It is a peculiar advantage to the pauper lunatics of Ireland that the insane patients detained in poor-houses are under the jurisdiction of the Lunacy Commissioners; and hence they are far better cared for than their English brothers in misfortune, of whose mal-treatment and neglect striking details have been lately given in The Lancet.

An Unusual Surgical Lesion.—M. Gosselin admitted at the Beaujon Hospital on the 1st ultimo a robust man, aged forty-three, who had met with a fall from a plank laying between boat and quay, just after he had made a great effort to place a sack of coals on his shoulder. On admission, no fracture or dislocation could be observed about the shoulder-joint upon which he had fallen and where pain was complained of. Simple contusion was the diagnosis. The man was seized with delirium the same evening (probably *tremens*), and died fourteen hours after the onset of the cerebral disturbance. On examination, no lesion was discovered but a little blood within the capsule and a slight crushing of the spongy texture of the head of the bone. Was this the result of the fall or of the effort?

Perfect Happiness in Medicine.—M. Dumeril, Professor at the Faculty of Medicine and the Museum of Natural History of Paris, has just died at the advanced age of eighty-seven years. The deceased was member of the Academy of Sciences since 1816, and enjoyed great reputation as an indefatigable investigator of natural history. He published numerous works, highly valued for their great lucidity and descriptive exactness. M. Dumeril retained up to his decease the clearest intellect, often spoke at the meetings of the Academy, and was always listened to with the deference to which his age, experience, and knowledge entitled him. Hardly three weeks ago he took an active part in the discussion touching the longevity of toads, to which we have referred in this journal. The late professor breathed his last in perfect calm, not regretting life, and saying a few hours before dissolution, "I have always been happy."

PRINTED AND PUBLISHED
By JAMES HERALD, 24 Ann-Street,
NEW-YORK.

THE LANCET.

Journal of Medical, Surgical and Chemical Science and Practice, Criticism, Literature and News.

MR. WAKLEY, M.P. EDITOR. J. HENRY BENNET, M.D., J. WAKLEY, Jr. SUB-EDITORS.

IN TWO VOLUMES ANNUALLY.

Vol. 2. NEW YORK, DECEMBER, 1860. No. 6.

Introductory Lecture

DELIVERED AT THE

OPENING OF THE LONDON HOSPITAL MEDICAL COLLEGE,

Session 1860–61.

By Robert Barnes, M.D. Lond.,

Fellow of the Royal College of Physicians, Assistant Obstetric Physician to the Hospital.

Gentlemen,—In undertaking the honorable duty entrusted to me by my colleagues, of addressing you to-day, I did not feel it incumbent upon me to decline the task on the ground of the difficulty of saying something new. The purpose of an introductory lecture is not the affording an opportunity of saying anything new, but of saying something that students, taking their first step in a new career, ought to hear, and which they may, perhaps, hear for the first time. I am to presume that you, or those to whose affectionate and more experienced counsels you defer, have duly considered your personal fitness for, and prospects of advancement in, the profession of Medicine. I propose to offer you some general remarks upon the relations of Medicine to society at large, in order that you may more clearly appreciate the position you are about to occupy, and be led, I trust, seeing the height and extent of the mission on which you are embarked, to pursue your studies in a liberal and generous spirit. Your first aim will no doubt be to acquire that theoretical and practical knowledge of the healing art which is necessary to enable you to enter upon the duties of practitioners of Medicine with comfort to yourselves and advantage to those who may put themselves in your hands. But I am sure you will feel that this is not enough. To discharge conscientiously the implied contract into which you enter with your patient, to do your best for his relief in return for your fee, is to do nothing more than is expected in every commercial transaction. If nothing more were done, Medicine would hardly rise above the level of trade. It is not thus that Medicine has been served by those illustrious men who have raised their calling to a foremost place in the rank of professions—who have created an estate of honor and authority with mankind, which you and all of us inherit, and which we are bound to transmit unimpaired at least, if not augmented, to our successors. You will remember that from the moment you enter the profession, you come into possession of that inheritance which the genius, the philanthropy, and the devoted industry of others have accumulated. You will at once be placed in the enjoyment of a status in society, and of a consideration amongst your fellow-men, which you will be conscious have been earned by merit not your own. There is many a man who, having attained the highest honors and the most commanding position which his country could bestow, has confessed that the legacy of a good name has won for him more good-will amongst men—incited him more to honorable labor, and contributed more greatly to his success, than the inheritance of material wealth could have done. That which a man is incited to do to sustain the credit of his family, should you do to sustain the credit of the noble fraternity which adopts you.

Now, in order that we may do this, let us examine the field in which we are engaged to work. Our special object is the cultivation of Physical and Biological Science. These departments of knowledge are indeed largely indebted for their existence and development to the labors of medical practitioners. They constitute the basis of medical knowledge. They, at the same time, afford the student an inexhaustible exercise in training his powers of observing and judging.

It is very true that the study of these Sciences of Matter and of Life does not exclusively belong to the domain of Medicine. But it is certainly true that the most ardent and the most successful promoters of these sciences have always been found amongst medical men. Our Art consists in the application of a knowledge of Life, and of the influences of Matter upon Life. If we begin to study the nature, or rather the phenomena and laws, of Life in Man alone, we are soon irresistibly attracted to extend our observation to other creatures. As we proceed in this study, the beauty and order and correlation of the organic and inorganic worlds open more and more upon us; our knowledge of each animal or plant becomes more perfect and luminous through the constantly multiplying beams of intelligence reflected at every step; and being constantly reminded that our professional duties called upon us to make all our acquaintance with the vast field of Biology subservient to the benefit of Man, we enjoy a sure guide and a never-failing stimulus to help us in the right prosecution of our task.

This prominent position amongst the students of Nature—a position ennobled by the practical applications and vivifying influences of our daily duty—brings the medical profession into the most friendly relations with the learned of all countries. Apart, but deriving additional force from, our strictly professional character, we form the centre of the large and evergrowing body of naturalists.

And let no statesman or ruler of men undervalue the political force of the students of Nature. Calm and secure in the armour of Truth, independent and great-hearted from the habit of free inquiry, beneficent from the contemplation of the proofs of the goodness of God, Science is ever working peace and good-will amongst men. Tyranny may control the press, blotting out the truth it fears, and publishing congenial falsehood. Science it cannot control. Here, even in the most despotic countries, the human mind finds healthy exercise. In all the Ages of Iron when men have been held in political thraldom at home, and kept in savage enmity with their fellow-men abroad, the holy oil of Science has ever tended to smooth the hardships of domestic subjection, to soften the animosities that divided nation from nation, and to keep alive the sometimes flickering and eclipsed, but never extinguished, flame of Liberty. Whatsoever the diversity of manners, language, government; whatsoever the political differences that held nations or their rulers at variance; the gentle and beneficent spirit of Science has supplied a link of international union that has never been broken.

We are physicians; we stand at the head of the students of Nature. As physicians, we command the respect and affection of the unlearned for the benefits that attend upon our professional ministrations. As students of Nature, our collateral or ancillary pursuits stretch out in so many directions that we are brought into amicable contact with every society and every individual engaged in the pursuit of natural truth. We may without arrogance go further, and claim to be heard amongst those who devote themselves to literature, philosophy, and statesmanship. It is impossible for the physician to study his patient, Man, without observing and learning much that must remain hidden to others concerning the healthy and disordered manifestations of his mental existence. In the right appreciation of this knowledge lies the clue to the unravelling of many a problem in history or contemporary sociology. The basis of Metaphysics is Physiology. It is probable that Locke would hardly have exercised that paramount influence over this science, which is even at this day continued, if he had not been guided in his studies by the knowledge derived from his medical education. The acts, the *res gestæ* of man, are the results of his mental operations, which in their turn are initiated or modified by external impressions—the influence of physical agents upon Life. It must needs be, therefore, that the student of natural history and of man will often have a keener insight into, and a more intelligent appreciation of, the motives and actions of individual men, of races, and of nations, than the mere closet historian, or even than those who make, not write, history. I might ask, what is History without Ethnology?

Thus we may see that our studies and our practical pursuits bring us into relation with all grades of society, and make us, as it were, the golden link that binds all classes and all nations into one harmonious family. Our study is Truth, the glorious truth of Nature as revealed in the Creation. Our aim is Beneficence; to allay misery, to assuage suffering, to advance the physical and moral well being of mankind. Viewed as an educational agent, as a means for cultivating the highest and best faculties with which man is endowed, the study of Medicine and the collateral sciences is unrivalled in the whole range of human knowledge. That undeviating pursuit of Truth it is which we may claim as the peculiar attribute of our profession. When we look upon a suffering patient, our first and constant thought is to penetrate the mystery of his affliction, to ascertain what it is that traverses and disturbs the course of health. Our object is to seize and comprehend the effort and action of Nature in combating the influences under which she is laboring. We seek to aid her in the conflict; we are compelled to observe and to follow her laws. If we deviate from this path; if, losing sight of the beacon of observation, we chase the ignis fatuus of speculation, we shall surely miss our aim, and fail to benefit our patient. We are thus constantly called back to the observation of Nature as our Guide. He who would minister to Nature must learn to interpret her. The active duty of the physician thus animates and directs his every study. He does not seek Truth that he may contemplate her charms with the rapt devotion of the abstract enthusiast. He seeks her not for her own sake alone, not for his private intellectual enjoyment, but for that knowledge which is power—the power of working good for his fellow-man. It is by this prerogative that the physician stands at the head of the students of Nature, and of all other professions. The mere naturalist, wanting the vivifying stimulus of useful application of the knowledge he acquires, will hardly rise to the higher revelations of science. It would be hard to name any other profession whose pursuit is Truth undefiled, and harder still to find one whose pursuit is Truth for the sake of Beneficence. If such another profession there be, it must be that of Religion. But if we reflect, we cannot fail to perceive that, whilst the physician may kindle his faith, and daily gather fresh evidence of the Eternal Truth by searching the works of the Creator, the inquiry of the theologian is either limited by the contemplation of the perfect system of Revealed Religion, or, if not satisfied with that, he is too probably bewildered amongst the mazes of mystic speculation and the angry logomachies of sectarian controversy. The lawyer does not always, seek the Truth; and great and good men have doubted whether the practice of alternately defending right and wrong may not cloud the moral sense.

History, again, being based upon human evidence, must needs partake largely of speculation. Even the cardinal facts are often disputed; and the characters of the most conspicous persons are variously represented. Thus the partizans or the enemies of Cromwell, Mary Stuart, William the Third, and William Penn, are constantly presenting us with new portraits. We are not yet sure that we have got a correct photograph from the life. A newly-discovered document, genuine or forged, may overturn all our present opinions. And if we still doubt, we have no resource but to examine other evidence of the same kind and equally fallible. Hence, I suppose, has arisen the school of philosophical historians, who, distrusting tradition, appeal to metaphysics and statistics, and reconstruct history out of the unsubstantial materials of their own theories and reveries.

In Natural Science we are not reduced to choose between fallacious evidence and speculation. When we doubt, we turn at once to the ever-open book of Nature; we consult, at first hand, testimony that may be cross-examined and verified by all. For example; if two anatomists differ in their description of an organ, a third anatomist does not waste his time in weighing and balancing the statements of the combatants; he proceeds at once, instructed by their experience, to re-examine at the original source.

And here let me break for a moment to exhort you to follow this plan. When you read one account of a disease in one book, and a different one in another, do not use one book as evidence to condemn the other. Both may be wrong. Search at the common source for yourselves. Never yield to the temptations of controversy; for notwithstanding our immeasurable advantage in having the standard of Nature to appeal to in our disputes, we have controversialists amongst us. If you think you have discovered some new fact or law, and your position is attacked, as it is pretty sure to be, do not reply or defend it by arguments or pleadings. Be assured that you and your opponent will never settle the matter by talking and writing. But humbly and patiently question Nature again, and appeal to her testimony whether it be for you or against you.

It is difficult to reflect upon the progress and position of any Science without thinking of Bacon. In London and the provinces some score of addresses upon Medicine will be delivered to-day. I suppose that every one of them will contain some quotation from, or reference to, that great philosopher. I wish I were original enough to dispense with his invaluable aid. Hear what he says of Science in general, and tell me if there is any department of human knowledge which more truly answers to his requisite than Medicine :—"For some men think that the gratification of curiosity is the end of knowledge; some, the love of fame; some, the pleasure of dispute; some, the necessity of supporting themselves by their knowledge. But the real use of *all* knowledge is this: that we should dedicate that reason, which was given us by God, to the use and advanvantage of man."

Add to the power of discovering truth, the desire of using it for the promotion of human happiness, and you have the great end and object of our existence.

Is there another profession which consists so simply in the pursuit of Truth and the practice of Benevolence? The only enemies that we combat are Error and Disease. In this contest we enter into no compromise with Evil; and the good we do to one fellow-creature never involves injustice or injury to another. Can the lawyer say this—he whose most brilliant efforts are not seldom exerted for the suppression of truth, and the gain of his client at the cost of an opponent? Can the manufacturer say this, whose wares, even when useful to mankind, are often produced at the sacrifice of the health of his workmen? Can the soldier say it—he who gains the highest honors amongst us—who is worshipped above all heroes—who is adored in proportion to the victories he has won—that is, in proportion to the victims he has slain? Is it urged that the end justifies the means; that to fight for freedom against delirious kings is an object worthy of the noblest courage and the sublimest virtue? Well, admit that it is so; but, alas! there is honor and fame for a Bonaparte and a Pelissier, as well as for a Washington and a Garibaldi

Shall I say it?—I think I may without fear of refutation—the life of the medical practitioner is one ceaseless battle to counteract the life-invading influences that men raise against each other. Against the law of Nature we do not presume to prevail. All that is born must die. But Medicine has clearly enough shown that at least three-fourths of those who perish succumb to causes more or less due to the cupidity or ignorance of man. Turn your eyes for a moment to the hospital close by. The first patient—sick with fever or consumption—is a victim to malaria rising up from the sewage-sodden soil, or engendered in his cramped and overshadowed dwelling, never purified by the living atmosphere or the rays of the sun. The next is a man whose limbs are fractured, or who has sustained some other injury which Benevolence, directed by Science, might have averted. Further on is one whose energies are destroyed—whose body is diseased—whose mind is debased by indulgence in those accursed drinks whose use is abuse, whose purity is foulness, to adulterate which is a superfluous or impossible fraud. These are amongst the evils we have to combat in civil life. From this scene the mind follows the surgeon to the field of battle. Here he has to avert or to quell the diseases that spring from ignorance and neglect, as well as to repair the injuries inflicted by the destructive engines of war. Or, when we are helpless to save—when the devilish skill and ferocity of generals have done their work too well—when we contemplate the slaughter of a Solferino, and might despair of the usefulness of our Art, we may remember, with rekindling pride, the great, the Promethean, gift of Jenner, more powerful to reproduce than war to destroy.

I do not know whether the members of other professions, after justifying the Horatian maxim so far as to express discontent at their own lot, will agree in wishing to exchange for that of Medicine. I fear that the satirist is right throughout his proposition. The sailor will continue to envy the soldier, and the compliment will be reciprocated by the latter; the lawyer will sigh for the life of the farmer, and the countryman for that of the citizen.

But this, I believe, may be asserted, that whether reason or accident have made a man a physician, we find fewer examples of desertion from our ranks than from those of almost any other profession. Yet the varied scientific knowledge acquired by the student of Medicine, the wide intercourse he enjoys with the world, and the extensive migrations to every corner of the globe which the practitioner makes, seem especially to invite him to try the fortunes of a new career. He rarely even yields to the temptation to retire upon the *congesta cibaria* to which the votaries of commerce, of law, of arms, are so eager to succumb. The physician mostly dies in harness. That love of knowledge which captivated him in youth grows into a passion in his old age. The case of Sir Astley Cooper is a common one. The illustrious Surgeon in vain sought for repose in a country life. His active mind long accustomed to investigate the ways of Nature as exemplified in her contest against disease, first sought relief, and something akin to its old pabulum, in watching and treating the diseases of animals, and then he came back to the scene of his former labors, again to exercise his intellect and his skill in observing and alleviating the diseases of man.

It is this ardent longing for increased knowledge, this fascination that Nature exercises over her disciples, that explains much in the conduct of the practitioners of Medicine which is either incomprehensible to the public, or often misconstrued. The common incentive to labor is the love of gain. The sailor encounters the perils of the sea, the husbandman tills the earth, the merchant toils at his desk the lawyer pours over his brief, then, *iras et verba locans*, he struggles in the forensic arena for victory: it may be over wrong—it may be over right. With all these the immediate motive to exertion is money. It is very true that many find a stimulus in the love of action. Slothfulness to most men is intolerable. Some kind of exercise for the muscles and the brain is necessary to the meanest enjoyment of life. But we may safely affirm that the truth of the maxim, *Labor ipse voluptas*, is by no one so thoroughly appreciated as by the physician. In the pursuit of his vocation, he not only exults in the sense of healthy and honorable exertion, but he is gratified by the consciousness that he is extending the acquisitions and enlarging the powers of the intellect; he feels not only the pride of new conquests, but the ever new excitement of expectation. Avarice may at last be satiated. As Samuel Johnson expressed it, "there is a potentiality of growing rich beyond the dreams of avarice." Although there may be few men who would refuse more wealth, there are certainly many who find themselves unable to make what they possess contribute to their happiness. Yet who ever complained that he had too much knowledge? What healthy man has ever yet felt that inexhaustible Nature had nothing more to reveal to him? What physician has ever felt the passion of discovery die within him, or that he had arrived at the limit of his capacity for doing good? Herein lies the secret of that singular characteristic of our profession, the eagerness to work for nothing—that is, without pay. This is why we see young men contest, with a vigor, and often at a pecuniary cost, equal to those expended for a seat in Parliament, the privilege of working gratuitously in our hospitals. Governors and the general public are mostly unable to recognise any but the sordid motive of worldly success. They see the earnest addresses in the newspapers, the voluminous circulars and testimonials, the active canvass from door to door, and not unnaturally conclude that what is solicited at so great a cost of time, money, and even of personal dignity, must possess a commensurate pecuniary value.

The simple fact is, that Medicine is essentially a progressive science. It is progressive as an abstract branch of knowledge; it is progressive as regards every individual who follows it as a profession. The medical man is always, and above all, a student. Deprive him of the means of observing disease, and you render him unhappy indeed. Not because he is, as a witty divine imagined, enamored with "pus and miasm," still less because the sight of human agony has any attraction; not because the employment is profitable in a pecuniary sense: he is unhappy because he feels that without the opportunity of observation, the knowledge he possesses will decay, the faculties which are strengthened by exercise will grow torpid, the skill that is acquired by practice will be lost.

I must say that Governors and other dispensers of medical patronage are not wanting in sagacity to discern and to utilize this passion of ours for Natural History. Sydney Smith, when asked to preach a charity sermon, thus discoursed: "Benevolence is a feeling common to human nature. A. never sees B. in distress without wishing C. to relieve him." It is wonderful what shining reputations for philanthropy are made by riding upon the doctor's back.

This reflection leads me to advert to the singular educational advantages of the great hospital within the mission on which you are embarked. It is no mean privilege you seek. You may not find wealth, but with earnestness and industry you will surely find happiness and competency. Our fleets, our armies, and our colonies cover the globe. All find employment for the members of our profession. The entrance into the public services is now the right of merit, not the fief of nepotism. Then there is the career of home practice before you. If we have few splendid prizes, if there be but few great fortunes amongst us, so there are but few great reverses. It is one of the immunities which we enjoy to a large extent with the other learned professions, that we are tolerably secure from those calamities which the errors and misfortunes of others so often entail upon those engaged in commerce. There is, perhaps, hardly any profession in which a man need depend so little for success upon extraneous aid. So long as he enjoys that blessing which it is his aim to dispense to others, the physician approaches most nearly to the Horatian standard of freedom and independence —the man "in seipso totus teres atque rotundus."

This, you will say, is the sunny side of the picture. It has no doubt a reverse one—a side not without asperities and shadows. Upon this, however, I think it unmanly and unbecoming to dwell. Success rarely attends the querulous man. No doubt you will all have your difficulties, your disappointments, your days of expectation, and your hours of despondency. In all this, I, more than most men in the profession, can sympathize. But unalloyed prosperity is not the lot of man, nor is it good for man. The true use of present adversity is to chasten and strengthen the mind for new struggles, to teach us to look hopefully into the future, not alone of this life, but of the life beyond.

Before concluding addresses of this kind, it is customary to offer some words of advice concerning the moral condition of students. I will spare you this infliction. I take your presence here to-day, as aspirants for reception,into the order of Medicine, as a pledge that your behavior will be that which becomes medical practitioners and gentlemen. We shall, I am well assured, all work steadily together for the credit of this hospital and school, for the honor of our profession for the advancement of knowledge, and the welfare of mankind.

You will act as accountable beings—as having to render to Him from whom all faculties, all knowledge, all the gifts of this world flow, an account of the uses to which we have put them. This thought of a responsibility beyond this life and this world is the surest guarantee against idleness, against meanness, against faintheartedness. I trust that, remembering this, no one of you will hereafter have occasion to exclaim,

> "O mihi præteritos referat si Jupiter annos!"

Is any further incitement needed to prompt to a life of labor and self denial? Another still is not wanting. Reputation, present and perennial, is a spur to every generous mind. It is not given to all to fill a niche in the Walhalla of Science; but every man who does his duty earnestly as a medical practitioner, in howsoever modest a sphere, will assuredly leave behind him a name that will be repeated with affection and esteem—one, perhaps, that will fill a large space in the cherished traditions of the country side.

Join, then, with me in the hope, hallowed by the greatest poet of that country which for ages has been the nursery of generous thoughts and noble words, and which now again is the theatre of noble deeds:—

> "Di non perder vita
> Tra coloro, che questo tempo chiameranno antico."

Abstracts
OF THE
INTRODUCTORY LECTURES
DELIVERED AT THE
VARIOUS MEDICAL SCHOOLS OF LONDON,
AT THE
OPENING OF THE SESSION 1860-61.

ST. BARTHOLOMEW'S HOSPITAL.

INTRODUCTORY LECTURE BY MR. SAVORY.

In commencing his lecture Mr. Savory earnestly congratulated those who were entering for the first time the profession of Medicine, inasmuch as henceforth they might become possessed of illimitable means of doing good, and find unbounded scope for the exercise of the noblest faculties of their nature. If vast incomes were not common, sudden failures were very rare. If scientific labors were not rewarded with state honors and pensions, it was a tribute to the laborer and the work; it was because the result was not limited to the aggrandizement of any sect or party. No men or party were rewarded, because all men, all parties, were benefited and advanced. But were not such labors in themselves ennobling? Was there no heraldry in science? Could titles have added a single ray to the lustre of such names as Harvey or Hunter? The superior charms of scientific labor were almost universally acknowledged. What studies could rival them in their influence upon the mind? What others so well engaged and exercised all our faculties and enlarged them? No class enlisted so many volunteers as the natural sciences. They saw men stepping out from all professions, as it were instinctively, into their domain. What a popular instrument was the microscope! How attractive to many the laboratory of the chemist! No subject could be broached so sure of entirely absorbing the attention as that of our structure and functions. So, then, what others turned aside to seek, lay directly in the medical man's path of duty. It was a happy lot for them that they could earn their bread in the midst of the most ennobling and exalting inquiries. They were to them not only beneficial, but absolutely necessary. He alone could become a sound and successful practiwhose precincts we are assembled. It has been recently well said by a distinguished judge Sir John Coleridge, that every educational institution has its idea—that which, if consistently carried out, influences all its teaching and all its details. Now, it is a peculiar feature of the London Hospital that its teaching is pre-eminenly practical. This characteristic it owes to the circumstance that it stands in the midst of an enormous laboring population. The London Hospital is planted here, not to arrest the passing glance of the wealthy, for they are few; but to relieve the wretched, who are many. More than half a million of the poorest of the inhabitants of this metropolis turn to these ever-open gates for help in those afflictions which crowded and unhealthy dwellings, bad food, hazardous labor in the docks and manufactories, misfortune, intemperance, and vice bring in their train. Day and night the tide of suffering humanity sets in. Denizens of every nation, patients afflicted with every form and variety of disease, and every injury that can be inflicted upon the human frame, all are seen here. We recognize no specialty; ours is, in the greatest and truest sense a General Hospital. An inexhaustible field for the observation of disease—boundless opportunities for the exercise of benevolence! The theory, the pedantry, of Medicine and Surgery, the "cram" for competitive examinations, may be, with tolerable success, pursued almost anywhere. But let those who would learn the inestimable art of detecting disease and injury at the bedside, and of treating them with the ready and effective skill of the practised physician and surgeon, go where the sick and the maimed are congregated. In this hospital every student is brought into immediate contact with the patients, and he may, when fitted for the trust, take a direct and active part, under the guidance of the staff, in their treatment. Here the dullest man, if he be but earnest, acquires by familiarity with his duties, a practical command over disease which gives him an immense superiority in his after-career. Here he is sure to gather that confidence, that *aplomb*, that readiness and fertility of resources in the presence of difficulty, which are the attributes of experience, and the most valuable qualities of the medical practitioner. Now a few words concerning the method of study—the mode of turning to the best account the vast means of improvement that lie before you. I gladly throw upon my colleagues the charge of doing this in detail. Each of us will point out to you the proper system to pursue in the study of his own department. I will now only advert to a few points of general importance. First of all, let me impress upon you the paramount necessity of becoming good practical anatomists. No amount of reading, no attendance upon lectures, no gazing at plates or diagrams, will compensate for the neglect of dissection. I am sure my surgical friends will bear me out when I tell you that the constant practice of dissection is not less necessary as a means of familiarizing yourselves with the structures whose injuries you will be called upon to repair, than as a means of mechanical education, of giving precision and dexterity to that instrument from which the surgeon derives his name. And as for the application of Anatomy to the practice of Medicine, I need but remind you that it is only the quack who pretends to cure the human mechanism without knowing the structures that compose it.

Connected with this point I will further urge upon you to frequent the dead-house. Thus passing from the study of healthy structures to the examination of them when altered by injury or disease, you will acquire the more precise ideas of pathology, and be in a position to understand the natural history of disease in the living. Here, also, I would advise you to acquire the art of opening dead bodies with neatness and accuracy. In practice, you will often be called upon to perform this operation, either to satisfy the anxiety of friends as to the cause of death, to aid in judicial investigations, or for the advancement of medical knowledge. I assure you it is an art; one which you will certainly appreciate hereafter if you possess it, and you will as certainly regret your deficiency if you possess it not.

The curricula and examinations of the licensing boards are now so definite and extensive, that it is inexpedient to advise any marked departure from the order of study prescribed. On the whole, it is the wisest course to take up the various subjects in the order indicated by the successive examinations. But I cannot omit to state my own conviction that you ought not to postpone attendance in the wards of the hospital. You cannot too early begin the exercise and training of your powers of observation. At first you may understand but little of what lies before you; but gradually you will see more and more distinctly. Where at first you will receive little beyond the confused image of rows of beds occupied by sick persons, you will soon, by the daily practice of analysis and by attending to the remarks of your teachers, arrive at the power of resolving this confused image into its elementary constituents. Each ward, each bed will present to your mind a vivid picture full of instructive details. One bed will be associated with the picture of a man of yellow aspect, dusky lips, propped up in a posture half-reclined, half-sitting, breathing with short and frequent inspirations; and this picture you will fill up with all the other symptoms of pneumonia, the causes that produced the disease, and the treatment which relieved it. Another bed will recall to your mind another pathological history; and thus you will go on storing up facts, extending your intimacy with disease, and invigorating your powers of observation. Your practical labors in the dissecting-room, in the dead-house, and in the laboratory will every day be throwing new and clearer beams of light upon your clinical studies. Every day you will experience something of that pure and intense delight which excited Archimedes when he discovered the law of specific gravity. And, if you study in the right spirit of humility and preseverance, you will every day open up new vistas of fresh inquiries to be prosecuted, of discoveries to be made. Acquisition and Anticipation will accompany you, will cheer and illuminate your path.

Such is the profession you aspire to join—this is tioner who had been a diligent student of those sciences which investigated our structure and functions in their healthy and diseased state.

He alluded to Anatomy, Chemistry, and Physiology. Let each one learn as much of them as he could, bearing always in mind the great object for which they were studied, never neglecting the purpose to which they were to be applied. They should remember, too, that Medicine and Surgery were founded and raised upon the natural sciences. All that they were beyond mere empirical arts they owed to their dependence upon and their association with these. It would be difficult to find a man amongst us who had attained to any great eminence in the practice of his profession, or who, by his writings and precepts, had advanced our knowledge of disease or our power over it, who did not lay the foundation of his success in the distinction which he earned by his labors in the natural sciences. They found time for all this work; nay, it was well invested, for by it they were enabled to do so much and to such good purpose. The object of the students present must be to study anatomy, chemistry, and physiology, with a view to becoming sound and scientific physicians and surgeons.

If the practice of the profession did not tend to popularity and public applause, let them think, if they did not win the many, in what an enviable relation they might stand to the few. How much good was done without remuneration, commonly so called! Where was the consulting room that refused to acknowledge the passport of pain and poverty? Wherever man existed there was he the subject of disease and injury, and was, therefore, in need of the resources of medicine and surgery. But if to medical men much was given, from them how much was required! With more than ample scope for the exercise of the highest functions with which men are endowed, how powerfully were they appealed to to cultivate every faculty they possessed! With this wide field for their talents, should they, on the plea that they were small, bury them? That which the profession of Medicine had to offer was open to all; none were excluded. On what did laurels in life depend? The most gifted men often failed in life; the most successful men were by no means always the most gifted. But let them mark this—success was constantly associated with work. It was never really seen apart from work. Let them look into the history of men who had in that hospital made themselves known, and they would find that one great cause in common—industry, earnest, persevering industry. Through what grand struggles had such men passed! They were noble illustrations that difficulties proved the cradle of excellence. What was success? The attainment of the end they had in view, the accomplishment of that for which they strove. Whatever the object might be, it could be accomplished only by labor—labor proportionate to the result. How important that the object chosen be a worthy one. Let them not cast th ir offering before an ignoble shrine. Genuine work was no trifling matter: it was no less than the entire devotion of all our faculties to the difficulty to be overcome. The earlier the effort was made the more readily was the power of application attained. If a sure foundation of elementary knowledge were not laid, lacking this support the future work could never be relied on. To lay that first great stone was their business there that night, and then they could build around it and improve it, not hastily, but securely—not for display, but for endurance. Let them test, and examine, and scrutinize each portion before they left it, and ascertain that it would bear whatever weight they might lay upon it in the future and then, when the structure became conspicuously high, no one should detect a disastrous flaw in the corner stone.

Perhaps there was no subject on which erroneous opinions were so commonly entertained as the means whereby distinction had been won. There were so many fables to be told of sudden achievements in inspired moments, and of wonderful discoveries through accidental circumstances—such, for example, as the petty fictions of Newton and the apple, Galileo and the lamp, Gurney and the soap-bubble—that it was made to appear as if chance and genius were the sole conditions of eminence. These fictions had no place in the pages of genuine history. Wherever they read the full and faithful record of the life of a great man, there they read the tale of a life of earnest, persevering labor. He was not attempting to deny that there was more than this. So much could not have been done without more than ordinary intellectual powers, but with these there was always combined, as the inevitable condition of success, extraordinary work. Nay, more; in many cases there were extreme difficulties at the commencement. The biographies of orators, poets, philosophers, historians, statesmen, soldiers, were all alike records of the fact. There was the best evidence of the extreme labor which Cicero and Demosthenes bestowed upon their orations. They were not in the habit of trusting to their genius—they made it by their industry. If there was one branch of excellence which more than another was supposed to be the gift of un'utored nature, it was the faculty of verse; yet Lord Byron said he had revolved some of his compositions for whole years in his mind before he had attempted to write them down. Wordsworth spoke of the immense time he required to write even the shortest copy of verses before he could satisfy himself. What an admirable history of resolute labor was the life of Southey. Of Newton it had been said, "Even his recreation consisted only in a variety in his industry," and it is told that he wrote his "Chronology" fifteen times before he was satisfied with it. There were similar records of the labors of Burke, Hume, and Gibbon. Frederick the Great and Napoleon, like Cæsar, worked prodigiously.

Still more interesting to them were the labors of the great men of their own profession—of Harvey, Jenner, and Sir Charles Bell. Great was the genius of Hunter, and how great were his labors! Johnson had defined genius to be "a mind of large general powers, accidentally determined in some particular direction." Buffon said of genius, "it is patience." John Foster held it to be the power of lighting one's own fire. "Genius," said Carlyle, "means transcendent capacity for taking trouble, first of all." Although these and similar sentiments which had been expressed by Newton, Locke, Helvetius, Diderot, Michael Angelo, and Reynolds, (who held that excellence in art, however expressed by genius, taste, or gift of Heaven, might be acquired,) might in some sense be exaggerations—for it must be admitted that no amount of industry alone could have made men like some of these,—yet they showed the estimation in which these men held work, and the confidence they had in "the omnipotence of human labor." The most distinguished men had been invariably the most indefatigable laborers. The power of labor in subduing difficulties, and the absolute necessity of study as the inevitable condition of success, even in those whom nature had most liberally endowed, were still more strikingly shown in the recorded examples of early failures and subsequent success. As examples might be mentioned the cases of Demosthenes and Curran, Lord Byron and others' first attempts, the behavior of Frederick the Great, and Wellington's first campaign. They might depend upon it that genius commonly meant labor. Inspiration was only another term for industry. There was no waste of time or stagnation in nature, but work everywhere; for even in her most perfect productions we were permitted to recognise the consummation of work. Moreover, we saw everywhere by what humble and apparently insignificant agents the grandest results were achieved. Let them witness, for example, the coral reefs and the chalk and other formations. Let them also observe the all-important agency of time as an element in the production of the grandest results. So it was their duty to work—a duty they owed to themselves, to their friends, to their hospital, to their profession, to their patients.

In no quality of the mind did men differ from each other so remarkably as in what was termed the power of the will, and in the relation which it bore to the passions and emotions. As by the presidence of the will man was especially distinguished from the animals below him, so in the degree of its development did men vary more widely than in their intellectual endowments, strictly so called. Thus, to refer again to the example of men who had accomplished some great purpose in life, they found that, although such men had been by no means invariably distinguished by genius, yet they had all been remarkable for strength of will. In such men the will was dominant, subjugating, and controlling the passions and instincts. Thus they were distinguished, not so generally by intellectual wealth, as by the earnest and substantial application of the powers at their command. On the other hand, what pitiable spectacles had been presented by the grandest intellectual powers when accompanied by what Coleridge, in his wretchedness, described as "impotence of the volition"! Truly there was no slavery so abject as that which sprang from want of self-control—no victory so fruitful as that we achieved over ourselves. Thus those who had been great, who had been successful in accomplishing some high and noble purpose in life, had been remarkable for character rather than intellect. This distinction was an important one. The latter might accomplish great things, but it was the former which secured success in life. Men differed in ability, but infinitely more in conduct; and they were not responsible for the powers they did not possess, but for the use they made of the powers at their command. Based upon these arguments, the lecturer counselled resolution, energy, and perseverance on the part of the students, remarking that the faint and obscure traces of truth which they might here discern were indeed but the shadows of revelations to come. Yet, if now they saw through a glass darkly, hereafter they should see face to face. If now they were permitted to know only in part, then should they know even as also they were known.

CHARING CROSS HOSPITAL.

INTRODUCTORY ADDRESS, BY DR. CHOWNE.

Dr. Chowne first referred to the year 1815, when the Society of Apothecaries became one of the legally-constituted medical corporations, and to the period when, although membership of the Royal College of Surgeons was not necessary as a legal qualification for practice, the eminent reputation and *prestige* of the College attracted vast numbers who sought to be incorporated with that body. From those times to the present constant extensions and improvements of the medical curriculum of each have been in progress, in which the Society of Apothecaries, in all matters not strictly surgical, has taken a prominent lead. These curricula, however, are not complete, and amongst other subjects which press for admission are Psychological Pathology and Sanitary Science. The more ancient corporation, the Royal College of Physicians, which derived its charter from Henry VIII., exercises its high functions and powerful influence in the encouragement of liberal views and liberal institutions, in the advancement of medical science, and the elevation of the medical profession.

Anatomy, one of the first subjects for the student's attention, must be considered as initiatory to that wider sphere of research which constitutes the domain of Physiology—a research which carries its investigations in quest of analogies and illustrations into the widest latitudes of the animal and the vegetable kingdoms, as well as into the most minute inspection of the structures, the functions, and the attributes of their several productions. In the practice of Surgery, profound knowledge of anatomy is the foundation of success; it is the needful light to the eye and guide to the hand in the detection and treatment of bodily injuries as well as in the almost wonderful skill and precision which the operator displays in his mastery over the appalling difficulties which require the application of the knife. Anatomy is also the foundation of the diagnosis of the physician. It demonstrates the normal conditions of structures in health, and supplies the means of comparison in the study of Pathology. Neither anatomy nor what might be called microscopic anatomy, nor any power or perfection of ocular investigation, however, can enable the physician to obtain a knowledge of the constituent substances which form the various solids and fluids of the body, and the modifications which they undergo in the animal economy, without the aid of Chemistry—that potent science which embraces in its magnificent grasp the materials of which all things are composed; which has the power of rending asunder elements held together by the strong affinities of nature, and of again reducing them to the influence of their primary affinities, and to their original state—a science which follows so closely the footsteps of the natural phenomena of the physical world; which measures the proportions of the constituent atoms in any given aggregate of matter; and finally, which attains, in its operations, a degree of exactness almost equal to the precision of mathematical demonstrations, proclaims at once its own grandeur, its own usefulness, and its intimate connexion with that study which has for the object of its research the relations existing between man and the physical agencies by which he is surrounded.

Under the head of Materia Medica and Therapeutics, the student will receive instruction in that branch of medical knowledge which indicates the sources whence medicines are derived, the fitness of different substances for different uses, their individual powers, and their powers when qualified by ingenious combinations. It is the lot of the medical man, almost his whole life through, to encounter a succession of propositions, in some instances peculiar presumptions, if not absolute fictions, as to the means of assuaging suffering and saving life. Quackery, as it exists in the medical profession, might well be called a many-headed monster.' Quackery, moreover, is bold in its assertions, and wins confidence even by its daring and swaggering claims. It knows full-well how far assurance will sometimes go where the mind is prone to adopt new notions for novelty's sake. Poor human nature has, moreover, its weak side, and the invalid especially has faith in florid promises—an excusable infirmity, of which the knowing in quackcraft do not scruple to take cruel advantage. The honest enthusiasm and activity of mind, however, which explores new regions for new materials and new facts, is not only admissible in every profession, but is desirable, as is also the antagonist influence, in order that the results of hasty theories, which wait not for the fulness of experience, may be qualified and rectified by the caution and reserve which belong to the less sanguine.

The subjects comprised under the head of Medical Jurisprudence are of extreme importance in connexion with our civil and our criminal courts of justice, and also in connexion with courts-martial—military and naval. With regard to the detection of crime, the knowledge acquired in the course of medical studies, such as my junior hearers are now entering upon, and the experience such as they will hereafter gain, are appealed to for those lights which, while they guide, on the one hand, penal retribution to its proper object, guard with the most scrupulous solicitude, on the other, against fallacies and errors by which punishment might otherwise fall on the heads of the innocent. The Coroner's inquest, having for its main object inquiry into the circumstances connected with every case of death arising under suspicious circumstances, stands, however, in more obvious connexion with the medical profession than the other law courts; and it is not only desirable that you should become acquainted with matters of detail by which, as medical witnesses, you may be brought into contact with the Coroner's Court, but that you should also possess a knowledge of the relations in which it stands to the community, as one of the great and ancient institutions of the country, the uses and abuses, and the authority and efficiency of which are subjects of intense interest to the medical faculty as well as to the public. A struggle adverse to the healthy and vigorous exercise of the Coroner's Court has, for some time, been kept up in certain quarters, in order, under false notions of economy, to lessen, in divers ways, the costs of Coroners' inquests. In 1839, it was in the spirit of this ill directed aim imputed to one of the most efficient Coroners in the kingdom that unusual and unnecessary expenditure had been incurred in the discharge of his duties. A comparison of the costs in the district referred to with those of another district, though apparently invidious, became the only means by which the imputation could be refuted. But to what more unsound or more injurious alternative can the office of Coroner be reduced than that of an unseemly competition, having for its result no worthier object than a penurious administration of its pecuniary resources—a minimum sum total of annual expense—under the specious but false appellation of economy. It is now well known that the natural results of such proceedings followed—that Coroners were kept in trepidation, and shrank, in some instances, from the risk of harsh and humilitating suspicions, and painful accusations. Many of you are most likely aware that a Bill has now passed through Parliament to the effect that the Coroner shall be paid by fixed salary,—subject to occasional variations,—not by fees. These are matters which must soon force themselves upon the student's attention, not only because of the practical relation they bear to his own vocation, but because the Coroner's Court is, both on the ground of state policy and humanity, an indispensable department of the social fabric—an institution, moreover, to which it behoves the Government to confide the most ample freedom and latitude of action, in order that it may cope with the unforeseen, multiform, and subtle incidents which demand its far-seeing suspicions and untiring scrutiny. Besides the supposed economy of diminishing the number of inquests is the supposed economy also of dispensing with scientific evidence. But a tribunal having the objects and exercising the authority of the Coroner's Court, should, in its investigations, follow out to its furthest limit every train of inquiry calculated to elucidate the subject under inquisition, in order that its decisions should finally have, so far as science can supply, the character of infallibility. Amongst the examples of defects of this kind are those in which medical testimony is not so followed out. In all inquisitions on bodies, one of the first objects is to ascertain the cause of death; and the difficulty of discovering this increases with the improvements of science, and as evil purposes become armed with resources more subtle, and with means of concealment more secret. Neither is crime confined to the illiterate, but is perpetrated by those who have access to sources of knowledge which admit of criminal misapplication, and in whom are combined the talent and the wicked propensity to apply them to guilty ends; yet in cases of loss of life, apart from obvious causes, where, under the *outward* appearance of *natural* death, the subtle and too successful agencies of crime may be concealed, we have the anomaly of inquests and verdicts, in the utter absence of medical evidence, of inference and conclusions, founded on mere superficial probabilities, and of questions relating to facts of the utmost importance solved, or taken to be solved, upon mere supposition and surmise. That death, with all the appearances of being natural, may be the result of criminal agents, is a fearful thought, which carries with it the fullest conviction that *no* means should be dispensed with that can contribute, even in the smallest possible degree, to a perfect, full, and finally successful, investigation, not with the mere object of punishing the guilty for his guilt's sake, but for the higher purpose of taking from the evil-disposed the hope of even possible impunity, and of enhancing the safeguards of life in the highest possible degree.

Death, when not immediate and actually sudden where occasioned by asphyxia, by poison, or by whatever cause, is preceded by certain symptoms. These symptoms it is especially the province of the medical jurist to comprehend; and it is only by persons conversant with such symptoms that correct inferences can be drawn from them. We perceive, however, as if in ignorance of this important truth, that outward and mere circumstantial appearances are often relied upon, and this unhappily the more readily where bodily ill-health has preceded the catastrophe—that evidence of prior disease is not unfrequently received as proof of death from *that disease*, and therefore by natural causes. But who that calls to mind the craftiness, the wariness, and sometimes the consummate ingenuity of the perpetrators of crime, can do otherwise than tremble at a system which diminishes the safeguard of vigilance where need of protection is the greatest?—a system which virtually suggests to the cunning who lie in wait the opportunity favorable to their guilty designs; which holds out the broad hope at least, if not an appearance almost approaching to probability, that their criminal agents, under cover of pre-existing indisposition, may exercise their influence in secret, and that the effects of the poison and of the disease may so blend in their operations, that the guilt and infamy of murder may find shelter under an apparent dispensation of Providence.

Another evil arising out of false notions of economy is the dispensing with post-mortem examinations. In a very recent as well as very notorious trial for secret poisoning, some insufficiencies of evidence were attributed to the imperfections of medical science; and who amongst us does not know that, with regard to post-mortem appearances resulting from poisons and other artificial causes, the science *must* be imperfect, and that the degree of imperfection must be in proportion as post-mortem examinations are either not had recourse to at all, or not until after the objects of search have, for all available purposes changed their identity; when effects which might have indicated the cause of death are merged in those which are its consequences; when characters which at an earlier period had been legible, intelligible, and instructive have ceased to appear? The required opportunities of knowledge can be derived from no other source. The experience derived from the experimental poisoning of animals does not supply facts which are applicable with legal exactness to the human subject. And it appears to be in accordance with the soundest policy and the strictest equity that the Coroner should not be required to repudiate advantages, either present or prospective, from the mere fear of incurring an insignificant cost. Examples are not wanting in which juries, in their disregard of the resources of medical science, and in culpable reliance on their own unaided judgment, have committed the victims of dreadful crime to untimely graves, and have permitted successful guilt to enjoy —at least for a time, if not finally—triumphant impunity. Such events are disparaging to a tribunal which can be deemed to fulfil its objects only in proportion as the public mind is justly impressed with the conviction that its vigilance is perpetual and perfect—that it will not be deluded by the outward show of a fair aspect, however specious, nor accept an appearance for a reality, however deep the deception may lie hidden in seeming obscurity. That economy, indeed, which looks to an estimate of costs in comparison with the preservation of human forethought from the path of a broad, comprehensive, and imperative duty, into that of a narrow, sordid, and miserable policy, unworthy alike of the statesman and the philanthropist. With regard to sanitary science, it is a subject of congratulation that, through the unwearied zeal of our profession, the necessity of instituting sanitary measures and sanitary departments of public service has been impressed upon the Legislature, as well as upon the people.

Dr. Chowne proceeded to comment on the great need of caution in the adoption of novel propositions in medicine, on the advantages of topographical knowledge, and of an acquaintance with natural philosophy; and concluded with advice to the students in regard to the use of their time, and the regular and diligent attendance on lectures, which would be requisite to enable them to achieve the object of their desire.

ST. GEORGE'S HOSPITAL.

INTRODUCTORY LECTURE BY DR. PITMAN.

The commencement of another medical year presented a favorable opportunity—of which Dr. Pitman gladly availed himself—to offer some suggestions for the guidance of those who were about to commence the study of their profession. Possibly they might expect that he should, in the first place, endeavor to solve that difficult problem, "Who is a doctor?" and define how much learning is implied in a diploma, or what amount of professional skill and knowledge is sufficient to justify a claim to that much coveted prefix. But his purpose was more practical. To describe to them the qualities requisite for profitable study—to advise them as to the employment of their time—to anticipate difficulties—to inspire hope; in fact, to point out how they might obtain sound knowledge, how secure professional reputation and success, and so satisfy the expectation which their friends had formed. These were subjects which appeared to him better adapted for their consideration, as involving questions of the deepest interest to all. The profession which they were about to study was that of Physic, in the sense in which that term was generally understood—the art of healing diseases; a pursuit having for its object the attainment of means for prolonging life, and for relieving human suffering —one of the noblest occupations in which they could engage. Much, however, depended upon the spirit in which they entered on its study. It must not be considered as a task—it must not be undertaken simply as a matter of convenience or of duty, but it should be commenced and continued with a conviction that it would enable them to be useful, and would confer the power of doing good; and those were privileges which were not to be lightly esteemed. The art of healing, like other arts, depended on science for its principles, and fortunately science was no longer locked up in colleges and Royal societies, or inaccessible volumes. Its experiments were no longer mysteries for the privileged few. Its portals were no longer guarded by a phraseology which, to the multitude, was a foreign language. Science had left her retreats, and had commenced in familiar language the work of instructing the whole human race. It was no longer a matter of speculation or a mere employment of the intellect. It had passed from speculation into life. It was sought as a mighty power by which Nature was not only opened to thought, but subjugated to our wants. It was conferring upon us that dominion over earth, sea, and air, which was the first command given to man by his Maker; and this dominion was now employed, not to exalt a few, but to multiply the comforts for multitudes of men. Who would have foretold that the simple observation of the ancients, recorded by Theophrastus, that a piece of amber when rubbed acquired the property of attracting other substances, would have led to the discovery of electricity and its marvellous effects? Through a knowledge of its laws the lightning was deprived of its terrific powers, and subjected to the direction of a child, while thought was transmitted with the lightning's speed, almost annihilating time and space. An idea shadowed forth in the tenth century had by the industry of such men as Newcomen, Watt, and Stephenson, made us, in a measure, independent of the elements, and enabled us to travel over land and sea at a speed previously unattainable. By the sun's rays we could now arrest the shadow in its flight, and trace the most perfect picture with all the delicacy of the highest finish—one of the most beautiful arts which ever owed its origin to the application of scientific principles.

Dr. Pitman having earnestly advised steady and undivided attention on the part of the students, remarked that it was the observation of little things—of events apparently trivial and unnoticed by others —which furnished the medical practitioner with most valuable information; but if they looked without perceiving, or, as the Russian proverb expresses it, "Walked through the forest and see no firewood," many opportunities of acquiring experience and gaining knowledge would be lost upon them. How was it that so much was read and yet so little remembered? Because the attention was not fixed; it became unsteady, wandered away, and became engaged in other occupations, while the eye still travelled on over pages which might as well have been so much blank paper. He impressed upon them the necessity of a constant habit of reviewing the employment of each day. Men were naturally averse to any process of self-inspection, and feared to lay open the heart with all its motives, impulses, and actions, even to themselves; but if they could bring themselves to do this daily, and to do it fearlessly and faithfully, with the purpose of self-improvement, each day would satisfy them of the beneficial influence of the habit both on themselves and others. Some appropriate remarks followed on the importance of economizing time. Experience would soon prove to them that he who knew the true value of time and the importance of economy in its use, was he who found time apparently for everything; for punctuality in all relations of life, for the pleasures of society, for every rational amusement, and who was also the most assiduous and the most successful in the actual pursuit of his profession. And yet how common a thing was it to hear a person excuse himself for the omission of some duty, or for the neglect of some engagement, by saying that he had not time, yet acting probably as if he had an unlimited supply! There appeared to be some persons who had a remarkable power of so arranging their time as to make it available for many things for which others could not find leisure or opportunity. They had an instance of this faculty strongly marked thorough life in an ex-Chancellor now living. Many years ago Sir Samuel Romilly was applied to to undertake some business, but having numerous professional engagements, he excused himself by saying that he had not time, adding, "Take it to that fellow Brougham; he finds time for everything." A distinguished writer of the last century had stated that every person had two examinations—one which he received from others, and one, more important, which he gave to himself; not that they were distinct in kind, but that they differed in the source whence they were derived. It was not enough that knowledge should be brought by others within their reach, nor was their assistance sufficient to give them its possession; it must be made their own through their own exertions. From whatever source education was received, its aim should be to teach them rather how to think than what to think—rather to improve the mind, so as to enable them to think for themselves, than to load the memory with the thoughts of other men. Much of their time would necessarily be passed at the bedside of patients, making inquiries, comparing one case of disease with another, ascertaining their essential characters, and connecting these with the causes on which they depend. Note-book in hand, and recording daily every fact, however trivial it might appear, an accurate knowledge of disease would be acquired, and they would soon accumulate an amount of practical experience which would prove of inestimable service to them in after life. Clinical study, like all other studies, to produce its full advantage, must be pursued with a method —that is, regularly and perseveringly. Students were too much in the habit of desultory attendance in the wards to derive much benefit. They followed one physician or surgeon for a week, watched the cases for that time, and then did the same with another for the same period. The consequence was that no case of disease was carried through by the student, who saw in this way only odds and ends of illness. It was certainly walking the hospitals but nothing more. It was not study. To become acquainted with disease they must see it in every stage—in its commencement, progress, treatment, and termination, and the investigation of disease so conducted had a value which no other method could equal. So important was this method of study considered that every student was required to perform the duties of dresser and clinical assistant, and still further to promote this object prizes were annually offered to the most diligent and industrious in this department of study. The lecturer then announced the names of the students who had gained prizes. Although he had mentioned the names of the most successful of the students it must not be supposed they only were the industrious. The deserving might be many, while the rewards were few; and he would remind them that

> "The virtue lies
> In the struggle, not the prize."

Dr. Pitman proceeded to urge, with great force, that the conduct of the students in the wards of the hospitals should be marked by gentleness and kindness; that sympathy for the sufferings of others was to be cherished, so that the patients might see that they are not actuated in their investigations by motives of mere curiosity, but that they were occupied in measures for promoting their comfort and assisting their recovery. He would earnestly advise them to be thorough in their studies—to encourage nothing superficial, no half knowledge, no smattering. It might dazzle, but it rarely deceived. Some sound advice on the choice of pleasures and associates followed. There was a time, Dr. Pitman remarked, when the term medical student was synonymous with idleness, profligacy, and vice, but happily those days were past, and he believed that even Darwin himself would elevate the present variety to the rank of of a distinct species. A life of self-imposed labor was that which they had chosen, and they must not be deterred by difficulties or disappointments. It was their duty to work cheerfully, honestly, energetically making the most of small means and common opportunities, instead of discouraging themselves by comparisons and impossibilities; and in the spirit of true philosophy they should believe all things possible, as indeed almost all things were to those who were firmly resolved. There was always hope for those in earnest; despair was peculiar to the idle. They had adopted a profession; let them qualify themselves thoroughly for its practice. They had accepted its duties and responsibilities; let them not shrink from them. Let charity and benevolence be the chief features of their disposition—industry and perseverance their principle of action—integrity their guide of conduct. Let them pursue their purpose with energy and cheerfulness, and with a fine sense of what was due from them as gentlemen and members of a liberal profession. Their career could not then fail to be full of honor to themselves and of usefulness to their fellow-creatures.

GROSVENOR-PLACE SCHOOL OF ANATOMY AND MEDICINE.

DR. BLOXAM'S INTRODUCTORY ADDRESS.

After some prefatory observations, the lecturer remarked on two points which had been prominently under his notice in his experience of upwards of twenty years in that school: first, that parents were totally unacquainted with the qualifications necessary for the study of Medicine, and, therefore, frequently fell into the error of placing a son in a position for which he was unfitted; that the mental and physical qualifications of a youth should be taken into account, and that he should not be allowed to enter the profession from a fancied liking or caprice, but that his natural aptitudes should be carefully studied. Next, that it is indispensable that before he enter the medical schools he should have been liberally educated; and he congratulated the profession on the fact that preliminary examinations were about to be exacted which would ensure this result. In calling attention to the various curricula, another advantage was pointed out—the institution of two examinations in place of one, and the improved sequence in which the sciences were now studied, beginning with the auxilliary, as Chemistry, Botany, &c., and terminating with those especially practical, as Medicine and Surgery.

In arriving at the subject of Hospital Practice, he conceived that the present arrangements might be altered with advantage by instituting a larger number of clinical clerks, and entrusting each with two or more cases, as might be found expedient. By such a method, each student would become familiar with disease—would concentrate his attention on these cases, instead of diffusing it over the whole of the patients of an hospital. Such a plan, he did not doubt, might be readily organized, and it would be fraught with advantage to the pupil, whilst it would lessen the labor of the physicians and surgeons.

Dr. Bloxam earnestly recommended the student to adopt at the commencement of his career a settled plan for the distribution of his time, a neglect of which was the first step to its dissipation, or to a desultory mode of study greatly to be deprecated; and recommended his reading to be carried on *pari passû* with the lectures, and not in advance. Of lectures he thought there were far too many, and would gladly see the day when certificates should not be compulsory. If a student were possessed of the necessary information, why should he not be admitted to examination, no matter where he had acquired his knowledge? But to meet this, examinations must be not simply theoretical, but practical. He warned the student against expecting that, after he had obtained his diploma, all would be *couleur de rose*. Competitors were many, prizes few. The profession did not hold that place in public estimation to which it was entitled. Many points wanted reforming; but reform must not be expected from without; the profession must be purified from within. Was there no quackery *within* the profession? What was the present state of medical literature, when it was apparent that men write not because they have anything to say, but because they want something to do? Are medical elections pure? Are there no "frails" nor "men in the moon" amongst us? However, he relied on the future.

The lecturer concluded by contrasting the present state of the profession with its condition forty years ago, and congratulated his hearers on its vast improvement, due in great measure to the exertions of a spirited and independent press. He remembered the appearance of the first weekly medical journal, and felt it his duty to acknowledge the deep obligations "we are all under to it. Do not despair," he said, in conclusion; "I have watched the growth of professional liberty for thirty years; when there was a monopoly of teaching in the great metropolitan hospitals; when provincial schools did not exist; when lectures were not permitted to be published: when education was kept down to a low point. Look at the general practitioner now, and compare him with what he was then! Who fought this great fight? It is to the Editor of The Lancet that we mainly owe all this. Look at his vast exertions. He was the apostle of free trade in medicine, and well has he discharged his mission. Through evil report and good report that man has kept on his way with unswerving determination, with a constancy at which I have never ceased to marvel. Look at the spirit of the other journal. Essentially liberal; it must be so. Look at the valuable lectures and communications which weekly find their way to the *Ultima Thule* of our possessions, so that the practitioners in our remotest colonies are kept *au courant* with the discoveries of the day. All this must bear fruit, and after what I have seen I cannot despair of the future of our profession."

GUY'S HOSPITAL.

INTRODUCTORY LECTURE BY DR. WILKS.

The lecturer commenced by alluding to the advantages offered by this hospital for the purposes of medical study, and inculcated the necessity for students to begin to work in earnest, assuring them of the fact that just as a man sows so does he reap; and especially of this, that if a man fits himself for any position in life, the opportunity for filling that position will soon arrive. Dr. Wilks alluded to the decease of their senior physician, who had died since they last met, and spoke of him as one of the brightest ornaments who had ever adorned Guy's Hospital. Afterwards he went into some particulars respecting what he believed to be the true meaning of the word "practical"—a word which was constantly enforced on students, and which they often interpreted into an absence of any enlarged culture of the mind, or even into an ignorance of the allied arts and sciences, understanding by the expression "a practical man" he who can treat disease according to the method of the schools, and who knows no more. The lecturer insisted that, at the present day, since the discovery of the correlation of all natural phenomena, it behoved the doctor to look around him, and draw instruction from every branch of science, and even from the affairs of mankind generally; for that those only who have a wide range of observation and thought can hope to elevate their respective professions. "For example," he said, "I take up Davison's well-known treatise, and discover the difficulty which exists, both in the animal and vegetable kingdoms, in defining species, and how all created nature has, as it were, a tendency to run together. The opinions there expressed only tend to corroborate my own views, long maintained, with respect to disease, that the so-called typical affections of which we speak are to a certain extent artificial, or that we select certain similar examples of maladies to enable us to apply names to what in our ignorance we choose to call types. The student soon finds for himself that those admirable models of cutaneous disease in yon museum are but representatives of the more characteristic eruptions, while in practice he meets with them in every variety and combination. I might illustrate what I mean of the relation of one subject to another in fifty other ways, but another example will suffice, which has often pressed itself upon me with considerable force—that is, that what is true of man individually and of man in the aggregate is true, also as regards the morbid manifestation of his being. When we look around into the political world, and see this sudden outbreak of its peoples, or that unexpected revolution, it wants but a moment's consideration to perceive that these are but the outbursts of some long pent-up passions, just as the explosion of the boiler is the result of a long-continued undue pressure of its steam, or the explosion of the mine by the slow burning of the match. In the same way, if we look to individuals, we do not discover that the man who has been eminent for his respectability, though unexpectedly discovered dishonest, has therefore for only a limited period followed a course of roguery. From this contemplation of man in general I see a striking resemblance in his corporeal operations. I see, in fact, that the most important changes in the body are of a chronic kind. Just as in history the great revolutions may figure as the most remarkable events, yet in philosophy their slow beginnings can be written; so in the same way, although our best books may treat of the acute forms of disease as the types, yet a more profound consideration of the subject will, I think, show that the more chronic or slower changes are those to which we should rather give our attention; and that so far from chronic diseases succeeding the acute, as has usually been taught, the contrary is nearer the truth. I need scarcely illustrate my meaning by alluding to the sudden deaths arising from apoplexy or rupture of the heart; for, unexpected though they be, we know that they are but the consequence of long-continued changes in the bloodvessels in the one case, and of equal chronic changes in the muscular tissue in the other case."

Dr. Wilks than spoke on the subject of specialties in Medicine, and they received his most decided opposition. He considered that the body was so fearfully and wonderfully made that it was impossible to treat an organ separately; and as regarded any additional knowledge of disease which was said to be obtained by the attention being directed to any particular form of malady, he much doubted if this was the case, since diseased conditions were so commingled that they could not be isolated; and taking cancer as an example, the selection of cases of this affection, as it attacks the external part of the body only and isolating it from other morbid conditions from which it has no actual line of separation, appeared to Dr. Wilks to be the very best method for remaining utterly ignorant of its nature. He was sorry to think that special hospitals were established for interested motives; and he spoke of the degraded position in which the medical man placed himself who was always begging for his charity, and advertising his cures in the newspapers. That the specialty system, however, was not a novel one was seen by a quotation from one of Goldsmith's admirable essays, and in which he very properly holds it up to ridicule:—"In other countries the physician pretends to cure diseases in the lump. The same doctor who combats the gout in the toe shall pretend to prescribe for a pain in the head; and he who at one time cures a consumption, shall at another give drugs for a dropsy. How absurd and ridiculous! This is being a mere Jack of all trades. Is the animal machine less complicated than a brass pin? Not less than ten different hands are required to make a brass pin, and shall the body be set right by one single operator. The English are sensible of this force of reasoning. They have one doctor for the eyes; another for the toes; they have their sciatic doctors and inoculating doctors; they have one doctor who is modestly content with securing them from bug-bites, and 500 who prescribe for the bite of mad dogs." Dr. Wilks thought that the profession lay open to this ridicule, and that, therefore, it was time for its members to consider seriously how by any such methods of practice they were imitating the charlatan, and really obscuring the boundary which had been hitherto so well marked between them. He considered that the great hope of the regeneration of the profession lay in the promised connexion with the College of Physicians, and thus its necessary severance from the Apothecaries' Company; for it was his strong conviction that a profession and a trade having been so long associated together in the public mind had been fraught with the greatest evil. It had appeared, indeed, as if a druggist's shop had constituted the very basis of Medicine, and that the Pharmacopœia, or a particular method of physic-giving, formed the foundation of the art. Nothing could be more erroneous than such an idea, for he believed that if Guy's Hospital dispensary were destroyed, their wards would still be filled with patients to whom great good could be done without any medicines, which enlightened physicians considered now-a-days to be only ancillary. The belief, also, that legitimate medicine was founded on a system of drugs was highly mischievous, since it became thus capable of comparison with every system of quackery, these systems being founded on some specific mode of cure without the possession of any other merits. Take the method of cure away, and the cure was dissipated; but not so with orthodox medicine, which was founded on a knowledge of anatomy, physiology, and of the body in a state of disease. An observation of the latter had discovered a rationale of treatment apart from the administration of drugs. The term allopathy the lecturer altogether repudiated; it was a nick-name with which the profession was ticketed, but he denied altogether that its members treated disease on any method such as the word implied. He thought, moreover, that the specialists were enemies to the profession since they taught the public to believe that particular affections required a special mode of treatment, whereas it ought to be the effort of its members to teach that a long observation of disease is necessary to the successful understanding of all its manifestations, and that the best therapeutics are founded on a knowledge of general principles. The notion that there were particular remedies for different complaints was a vulgar error; but one, he was sorry to say, applied by some unworthy members of the profession for their own interested purposes. He considered that the disconnection of the profession from Apothecaries' Hall, and its re-erection on the basis of the College of Physicians, would be of immense benefit to the public, for they would thus be taught no longer to associate in their minds the art of medicine with drugs. He believed that this would be of much more advantage than the late act of parliament had been. He considered the Register, of little use, while gentlemen whose names were found within it were guilty of practices which were only worthy of the advertising quack. The distinction founded on titles was trivial, and to a certain extent artificial, whereas he (Dr. Wilks) would rejoice to perceive a substantial difference—that those gentlemen who were legitimately registered were in no way imitating the charlatans who were prosecuted by their Registration Societies. Those students who had finished their course had an arduous task to accomplish; and the most tempting and prosperous opening before them he knew was to take up some particular organ of the body, and maintain (by means of advertising a worthless book on the subject) some especial knowledge of the treatment of its disorders. He warned them, however, against it, as they were assisting in ruining the noble character of the profession. He then concluded by inculcating the importance of a moral and religious culture.

KING'S COLLEGE.

DR. GEORGE JOHNSON'S ADDRESS.

The lecturer dwelt mainly upon the merits of the late Dr. Todd, and especially emphasized the claims he had established upon the gratitude of King's College and the Hospital. He was, indeed, the founder of the hospital. Dr. Todd, having been appointed Professor of Physiology in the year 1836, soon saw the vital importance of establishing a clinical hospital in connexion with the College. To his clear sense of the need, and to his success in obtaining the sympathy and the aid of very zealous and able fellow-workers with him, we owe it that in the spring of the year 1840 clinical instruction commenced in that old building now soon to be entirely replaced by the more commodious and imposing structure, which is rapidly approaching completion. Dr. Todd was also, with the late Bishop of London, the originator of St. John's House Training Institution for Nurses. Another foundation which had exerted an important influence upon the College and upon medical education in general was that of medical scholarships. These were first instituted in King's College, and their establishment originated with Dr. Todd. The Warneford Scholarships, which were intended to encourage an extended preliminary education amongst students preparing for the medical profession, were always considered by Dr. Todd to be in the highest degree beneficial. Another important element in the arrangements for medical education in that College which originated with Dr. Todd was the establishment of the office of medical tutor. The lecturer announced that Mrs. Todd had presented to the hospital, for the use of the present and all future generations of students, Dr. Todd's large and valuable medical library. He then proceeded to address himself more particularly to those who were about to commence their professional studies, and dwelt upon the usefulness of the discipline of a college as an instrument of education. He then referred to the practical examination by the bedside, to which candidates for a degree at the University of London are now subjected, as giving a wholesome stimulus to clinical study. He concluded with an exhortation to his hearers to exhibit in their conduct the high principles and motives of Christian gentlemen, and enforced his remarks by the following passage from Bacon: "Knowledge is not a couch whereupon to rest a searching and restless spirit, or a terrace for a wandering and variable mind to walk up and down with a fair prospect, or a tower of state for a proud mind to raise itself upon, or a fort or commanding ground for strife and contention, or a shop for profit or sale; but a rich storehouse for the glory of the Creator and the relief of man's estate."

ST. MARY'S HOSPITAL.

INTRODUCTORY LECTURE BY DR. TYLER SMITH.

Dr. Tyler Smith delivered the opening address to the students and friends of the Medical College of this hospital, of whom there were a large number present. He said that custom had long made the 1st of October the commencement of the medical year in London. At this season the bands of young men who had resolved to devote the rest of their lives to Medicine, and upon whom the responsibilities of the profession would devolve in future years, met together in their schools and colleges to begin the arduous business of study and preparation. At these annual gatherings teachers and men of mature years felt it a pleasure to attend to welcome the youthful students, to renew, it might be, the feelings of their own youth, or to show their special interest in some relative or friend amongst the number. These occasions occurring year by year, and being dealt with by the foremost minds in the profession, it became difficult to produce anything novel in the shape of an introductory address. It occurred to him that he could do nothing better than to attempt to pass in review some of the scientific and social aspects of Medicine, so as to give the students a fair idea of the profession they had adopted, and to remind the practitioners of the scope and duties of the body to which they all belonged. Celsus told them that medicine and surgery originated in the necessity of ministering to the ailments engendered in studious men, and in the various accidents of war and ordinary life. The profession probably had an earlier beginning than this. It must have commenced when the first moan of suffering and pain produced the desire to alleviate and remove it. Humanity, then, was the foundation of the profession. As it first arose in bygone ages, they might now witness it in the rude endeavors of the medicine men of savage nations. Even when human nature was in its most barbarous condition, efforts were made to succor the sick. The modes in which Medicine had advanced from these rude and feeble beginnings, allying itself with, and deriving and giving support to, every form of civilization which had flourished in various nations and races upon the face of the globe, has often been investigated. He (Dr. Tyler Smith) preferred on the present occasion to dwell upon the profession as it was, and as they might hope it would exist in the future.

The distinguishing pride and characteristic of Medicine in our own day was, that while retaining all that it had derived from ages and experience, the profession had now allied itself with science to a far greater extent than could be said of any other calling. They were still, as it were, gathering sand by the sea shore, but a vast amount of scientific knowledge had been garnered so that it could never again be lost. They were still swayed to and fro by a variety of doctrines and opinions. Every age produces its ideas, but even in those oscillations there was progress, and in each department of art solid truths were established in each succeeding generation upon the surest foundations. The student of Medicine was emphatically a student of science. In devoting his first years of study to botany, chemistry, and anatomy, he was not merely basing his subsequent medical knowledge upon science, but he was gaining an amount of insight into the organic world of animal and vegetable life, and the inorganic materials of the globe and of the universe itself, which was not required in any other profession, and which made the real medical man a student of nature throughout his entire career. They were apt to forget this great privilege from the very constancy of its use, just as in the daily use of sight and hearing they ceased to think of the inestimable value of these senses. The medical practitioner was different from other men in seeing into and through the physical world at every point. There was to him nothing of mere surface, as in the case of men upon whom scientific knowledge had not dawned. The strength and the weakness of man came alike under his observation. Medicine was not national, but cosmopolitan in its scope. Every advance in medical knowledge in other countries was instantly reflected upon our own, and was instantly incorporated with the general stock of knowledge. They made progress not by the mental efforts of our own countrymen alone, but by those of the whole world.

A man might be justly proud of the literature of the profession. From the time of the tablets of Hippocrates, medical knowledge, as it was preserved in written and printed books, had been accumulating. No special libraries were richer, if so rich as their own. The libraries of the Colleges of Physicians and Surgeons, and the Medical and Chirurgical Societies, were splendid monuments produced by the medical minds of all ages and countries. The contributions of our own medical authors in general literature were such as to confer lustre upon Medicine.

There was another tendency of the medical mind upon which it was right to dwell. They had, he believed, availed themselves of the advantages of association and co-ordinate labor to an extent not met with amongst any other body of men. Their ancient Colleges might have their faults, but in those institutions the various branches of the profession were united in a way which was unknown in the Law or in the Church. There were no other institutions in existence analogous to these Medical Societies, in which, year after year, the practice of Medicine was advanced by their ripest minds. These results were produced in a series of volumes, which ranked amongst the classics of the profession. The associative tendency of the profession was of very old date. The foundation of the Royal Society, the results of which, in the extension of natural science were incalculable, was largely contributed to by medical men. They might also remember with pride, that the British Museum, the grandest collection of nature and art which the globe contained, originated with a physician. It was to Sir Hans Sloane that the country owed this object of pride and wonder. Within their own profession the Hunterian Museums in London and Glasgow were probably the most marvellous monuments ever raised to exemplify the glory of the Creator and the industry and wisdom of man.

In the medical press they had an important engine of progress. The existence of this power, and its flourishing condition, depended greatly upon their tendency to associative labor. Into this treasury were poured week after week the labors of the best men in the profession, and its directors shaped and produced these exertions so as to render them useful to the medical public. The medical press was to the body medical what medical men were to the public. The press, more than any other influence, moulded the profession as a body politic. By its agency, extravagancies were checked, grievances hunted out and redressed, discoveries made known, and abuses prevented. In a word, the press, as a whole, was an embodiment of the public opinion of the profession, and when it ceased to be this, it failed in its influence. It was perfectly democratic, as open to the voice of the youngest student as to the utterance of the highest persons in the profession. It was a great educational instrument, modifying the laws, institutions, opinions, habits, and manners of the profession, more than any other single agency. In consultations two or three might meet; in Societies medical men might gather by hundreds, but in the press alone could they all, as it were, stand face to face, and enjoy the privilege of an exchange of thought. It alone could deal with the thousands of the profession as with one man. Some might deplore that ephemeral writings tended to displace the solid tomes which were produced when the periodical press did not exist; but they must accept the age as they found it, and in the universal diffusion of the products of thought, the incessant collision of thousands of minds busied with the same subjects, more truths and progress were elicited than were ever produced by solitary thinkers.

If we compare our state with that of other professions, we shall find that, while we possess certain advantages, we have some disadvantages, which time and our own exertions must correct. Medicine cannot, like Religion, take its stand upon revelation and the canons of churches; nor has it, like the legal profession, codes of laws to mould and administer.

It has, however, to deal with the revelation belonging to natural knowledge, which is as much the work of the Creator as Holy Writ; and it has, as we have seen, the broad laws of science to interpret and exercise in all that relates to the preservation of health and the cure of disease. We are in many respects the youngest of the professions. Medicine as a profession has been of slow growth, on account of that which will in the end be its strength—viz., its dependence upon science. It must reach maturity by a tardier progress than the Law or the Church. These two professions have grown up with the constitution of the country, of which they form important elements. Hence the Church and the Law are not merely professions, but great political institutions, sharing between them some of the highest honors of the State. After the royal family, the Archbishop of Canterbury and the Lord Chancellor take precedence as the highest personages in the realm, ranking before even the oldest nobility. The President of the College of Physicians is, on the contrary, a private person. But if we have not, like the Law or the Church, any great political prizes, we contribute our part to the hierarchy of fame, and such names as Harvey and Jenner are greater and more enduring than rank or lineage. The Law or the Church scarcely offers scope for the production of such men as these. At the present time Medicine can hardly be said to have any political life. Individually, the medical man has as much influence as the lawyer or the clergyman; but collectively, or politically, we can hardly be said to have any position in the State. Our political existence, if we ever obtain it, belongs entirely to the future. It is only within the last year or two that Medicine has been formally received within the pale of the law as a collective body. Up to the passing of the Medical Reform Act in 1858, our various colleges and examining boards had no legal bond uniting them into one body. This Act grafted Medicine into the State. For the first time, all legally qualified medical practitioners were placed upon a public register; for the first time, it was made illegal to assume medical titles unjustly; and for the first time, provision was made for a national Pharmacopœia, for uniformity of educational requirement and examination by all our licensing bodies, and for reciprocity of practice in the three kingdoms. We may reasonably hope that, dating from this enactment, a new career is open to Medicine. Undoubtedly, our profession has its State aspects and political duties, and these cannot fail of becoming more and more important. In all that relates to sanitary requirements, and the administration of the laws relating to public health, the medical departments of the army and navy, the regulation of lunacy, the medical relief of the poor, the yearly legislation in all that relates to our profession and the health of the community, Medicine has great and increasing duties of a political or State character. Hitherto the medical voice has scarcely been heard in Parliament. Every other section of the community is better represented within its walls than the medical profession. We seem to have imitated the clergy in the cultivation of non-political tendencies, forgetful that we have no such advantage as the representation of the Church in the House of Lords by the bench of bishops. There are not wanting signs that the members of the profession are about to shake off the political apathy which has so long characterized them, and that they will urge their claims to special representation, and offer themselves to constituencies for election. No doubt our profession is an arduous one, but not more so than the law. Yet the lawyer, after the fatigues of chamber practice, or the still greater fatigues of the Law Courts, takes his share of work at St. Stephen's. It is the fact, that the hardest workers amongst the legal profession are those most devoted to Parliamentary labor. The common idea is that medical men have no time for such duties; but it is the fact that in the present day a considerable number of our leading physicians and surgeons live in the country, and leave London every afternoon and evening, thus combining the pleasures and duties of professional and country life. By this class and by those who realize fortunes, and yet remember that they have some duties towards the profession which has given them fame and reward, we may hope that the political weakness of our profession will be removed.

As regards special education and preparation, a high, if not the highest, place may indisputably be claimed for the medical profession in this country. It may be questioned whether there is any other body whose special preparation can in the least degree compare with it. Medical teaching and examination are of very old date; but, during the present century, the advances made in these respects have been very great. Our various examining bodies have on the whole been vying with each other to make them effective and practical. In this they have been urged on by the moral sense of the profession, which has invariably resented any attempt to render an entrance into its ranks without proper education and testing possible. The Church and the Law are only following at a long distance in this path. For the Bar, dining is still a part of the preparation; examination is a subordinate matter; and in the Church the private examination of candidates for holy orders by the bishop and the episcopal chaplain is but a feeble representation of the examinations of Medicine. Many of our leading physicians take the degrees in Arts, which go so far in education for the Law of the Church, before they begin their special medical education. Taking examinations as the test of proficiency, it may be stated that a student preparing for general practice, and intending to pass the Hall and College, will have to pass six separate examinations, extending over six days, before he receives his diplomas. Those intending to practise Physic, and to become M.D.s of the University of London, and members of the College of Physicians, will have to pass seven examinations, extending over upwards of three weeks.

The concluding part of the lecture was devoted to a consideration of the special advantages offered at St. Mary's.

MIDDLESEX HOSPITAL.

The inaugural address was delivered by Dr. Charles Coote, late Fellow of Pembroke College, Oxford. The lecturer spoke at some length of the high moral tone which should be observed by medical students, dwelt on the noble incentives to study which their profession provided, and urged a close attention to the study of anatomy and physiology. At the close of the lecture a *conversazione* was held in the new buildings connected with the hospital.

UNIVERSITY COLLEGE.

The proceedings of the new session commenced with the distribution of medals, &c., to the successful competitors of last session. As usual, the fortune of the day was for the most part enjoyed by a few students, who, from certain peculiarities of mind probably, were each enabled to gain distinction in several different classes. Thus, one took away four or five medals, another three or four, and some a less number; the same student repeatedly leaving his seat to receive the reward of his merit, from the hands of Professor Erichsen, the Dean of the Faculty.

This ceremony completed, Mr. Erichsen delivered an admirable extempore address. He stated that, having just returned from the land in which newly-found liberty was arising, (an allusion which was received with cheers,) he had been so unexpectedly called upon to deliver the address, that he must apologize for not having prepared one in writing. He first directed his observations to the students who were about to leave the school, and next to those who were entering on their studies, and who, having just witnessed the triumphs which had been gained by the successful aspirants for honors, ought to feel that on themselves would in future devolve the duty of sustaining the reputation of their college, and of continuing the efforts to that end which had been made by their predecessors. He contrasted the present scope of medical education with that which obtained at the foundation of the college, to which event he believed the inauguration of the new and improved system of medical teaching was mainly due. He argued that clinical instruction, as now pursued in the schools, had originated in University College; and, after advocating other claims which that college had to consideration, he remarked that, what would perhaps by some be deemed its culminating glory, out of it had arisen the University of London, which name had been borne by that college for the first ten years of its existence, until it was yielded in favor of the more extensive incorporation. The hospital attached to the college was smaller than many others in the metropolis, but the most had been made of the facilities for instruction afforded by it; and if students brought with them a full determination to make use of what they would witness within its walls, they would have ample opportunities of acquiring a complete knowledge of their profession. He gave some further excellent advice to the students assembled before him; and he judiciously reserved to the last period of his address the hearty and welcome assurance to the junior pupils that in the course of the difficulties, of whatever kind, which they might meet with in a great and strange metropolis, their professors would be ready, if consulted as friends, to give them whatever assistance might lie in their power.

Much approbation followed the termination of the address; and in the course of the proceedings the name of the late Mr. Liston, and those of Dr. Jenner and, in particular, of Dr. Sharpey (both of whom were present), were received with loud and prolonged cheering. The large theatre was very well attended, and amongst the audience were numerous ladies, who doubtless were present to witness the bestowment of the honors awarded to their relatives and friends.

WESTMINSTER HOSPITAL.

MR. POWER'S ADDRESS.

The session commenced at this school with an introductory lecture by Mr. Power. There was a very full attendance of pupils, and many gentlemen previously educated here attested by their presence the interest they felt in the proceedings. The object of the lecturer was to place before the student the general scheme of his future work; to show him what difficulties surrounded it, how those difficulties might be surmounted, and to what noble ends his well-directed and successful efforts would lead. Professional education had a twofold end in view—the acquirement of accurate and extensive technical knowledge, and a process of mental training and discipline. By constant practice, any faculty of the mind might be developed to an extraordinary degree; yet true greatness did not lie in intellectual feats, but rather in such due adjustment and balance of the faculties, that they could be applied with equal energy and success to every subject. The preliminary studies of our profession, singularly various and interesting, occupied the mind with much that tended equally to improve and elevate it, and preserved close relations with that which was the main object of all our studies—Life. The importance of chemistry was alluded to—the interest that attached to it, from its antiquity, from the brilliancy of its experiments and the exactness of its deductions; and it was a matter of regret and surprise that the elements of this science did not enter more into the education of youth, on whose minds its expansive facts were calculated to make so useful an impression. The necromancy and alchemy of the middle ages laid the foundation of the exact chemical knowledge of the present day, and great as the results of modern analysis and research had been, a large field still remained open for future discovery, especially in the domain of organic chemistry. The greater and more comprehensive knowledge of the vegetable and animal kingdoms, the better prepared we became to enter upon the study of life; for in the humbler organizations were to be seen in their simplest operation those laws, and in their simplest forms those structures, which attaining their highest complexity in the highest animals, furnished problems which the most ingenious and gifted had yet failed to solve. The pleasure which resulted from a knowledge of these subjects was gracefully illustrated. How coincidently with them anatomy and physiology must be studied, and their relation to disease comprehended; how disease must be studied, not only in the living, but in the dead; how manifold were the opportunities presented to the student for the acquisition of these various branches of learning, were eloquently enforced. The necessity for close and prolonged mental exertion for the acquirement of these subjects in the short time at the disposal of the student, and how the exertion that at first appears a hardship soon becomes regarded as a pleasure, and how habits of self-culture acquired strength by exercise, were commented on. Then as regards the mental training or discipline, this consisted in the development of the faculty of observation, and of the power of reasoning correctly upon observation, good examples of which might be found in the brilliant results obtained by Galileo, Franklin, Jenner, and others.

Finally, the noble ends and aims of our profession, how it brings us into relations with all classes of the community, and how our various knowledge may be made to exert on all a powerful influence for good, formed an appropriate peroration to an address, which was listened to with marked attention, and received with prolonged cheering, the effect of the lecture being greatly enhanced by its being delivered extemporaneously.

A *conversazione* was afterwards held in the board-room. Many objects of interest were exhibited. Amongst the microscopic objects, Mr. Parker exhibited from his extensive collection of foraminiferæ some of the most interesting of this sub-class of the animal kingdom. Some beautiful injections from Germany of the minute structures of the kidney, eye, liver, &c., received marked attention. Smith and Beck's achromatic stereoscope proved highly interesting. There was also some ingenious apparatus shown by Messrs Elliot and Sons to illustrate various physical phenomena. Some remarkably good photographs from microscopic objects by Mr. Traer, of Han's-place, also attracted general notice. Tea and coffee were served in the course of the evening.

ARMY MEDICAL SCHOOL.

The first course of lectures at the Army School at Fort Pitt, Chatham, was opened on Tuesday by an eloquent address from Mr. Longmore, the Professor of Military Surgery, and Deputy Inspector-General of Hospitals. Mr. Sidney Herbert was present, as well as Dr. Gibson, C.B., the Director-General of the Army Medical Department; Major-General Eyre, commanding the garrison; Dr. Hume, Principal Medical Officer; Colonel Gordon, Colonel Twiss, Dr. Sutherland, and others.

The School is intended as a practical course of instruction for the gentlemen about to enter the medical service of the Queen's Royal and Indian armies. After passing a competitive examination in London, these gentlemen are sent to Chatham for five or six months, and there receive specific instruction in everything connected with the health of the troops, and with the specialties of military medicine and surgery.

Professor Longmore entered at some length into the causes leading to the formation of the School, and into the mode of teaching which was about to be followed; and concluded with an earnest appeal tc the gentlemen about to become assistant-surgeons to prove by their diligence and conduct that they were not regardless of the wise endeavor of the Government to improve their knowledge of the special duties they are to undertake.

Mr. Sidney Herbert, amid much applause, remarked on the new duties which now devolved on army medical officers. Instead of being merely curers, they were preventers of disease. In order to attract the best talent into the service, the Queen had granted increase of rank, and Parliament had voted increase of pay; and for these benefits the country would expect some return. This return would be amply secured, if, by diligence at Fort Pitt, the young assistant-surgeons should render themselves more competent to keep healthy and effective the men committed to their charge.

Major-General Eyre and the Director-General then addressed a few observations on the conduct of the gentlemen while at Fort Pitt, and the business was then brought to an end. Every one remarked that it would be difficult to find a finer and more intelligent-looking set of men than the forty-three candidates for commissions who were present on Tuesday at Fort Pitt.

A Course of Lectures
ON
PAIN,
AND THE
THERAPEUTIC INFLUENCE OF MECHANICAL AND PHYSIOLOGICAL REST
IN
ACCIDENTS AND SURGICAL DISEASES.

Delivered in the Theatre of the Royal College of Surgeons.

By John Hilton, Esq., F.R.S.,

SURGEON TO GUY'S HOSPITAL, PROFESSOR OF ANATOMY AND SURGERY TO THE ROYAL COLLEGE OF SURGEONS.

LECTURE IV.

Mr. President and Gentlemen,—In my last lecture I said that I thought it would be well if every surgeon would inscribe upon his memory, as his first daily professional thought, that Nature undisturbed has a constant tendency to repair her own injuries, whether those injuries be the result of fatigue, of accident, or of inflammation. I had purposed to extend these observations into the consideration of the means adopted by Nature in the affections of serous and mucous membranes to obtain a proper degree of rest after they have been the subjects of an inflammation, and although time will not allow me to do justice to the subject, I thought I could not with propriety, in these lectures, pass it over without a few remarks.

Serous membranes are secreting and absorbing organs. If a serous membrane be wounded, coagulable lymph is poured out, and it forms a temporary splint until the original structures repair themselves; in this way the inflammatory effusion produces a certain degree of rest to the original structures, and thus contributes to the work of reparation. The inflammatory effusion forms no necessary part of the ultimate bond of union; it merely holds the parts firmly in close apposition, and keeps them so until the union is perfected; and when the union in the original tissues is rendered complete, this temporary medium, or splint, employed by Nature is entirely absorbed, or at any rate completely disappears. Thus we find that when a serous membrane is inflamed, the lymph which is poured out (as the result of a wound at least) keeps the parts in an accurate position, and maintains them so until Nature has healed up the wound in the original tissues, when the lymph is absorbed. This is analogous to what we see in relation to fractures. When a fracture is not nicely adjusted, or much disturbance has taken place, either in the original accident or subsequently, Nature throws out a large quantity of new material, termed callus, which keeps the fractured bones accurately in position for a considerable length of time, until they have repaired themselves, and when they have achieved that object, the callus entirely disappears.

This subject, perhaps, receives its best and most practical illustration in cases of wounds to the viscera, and, no doubt, when looked at in this light, it suggests to every surgeon the great impropriety of doing anything which at all tends to disturb the parts in wounds of serous membranes. This subject, however, I cannot enlarge upon at the present time. I would ask you to suppose a serous membrane inflamed. What happens when this takes place? When it is not traumatic, but dependent upon some internal cause, (quite irrespective of any direct local lesion,) almost immediately a considerable quantity of lymph is effused, and this, after a time, coagulates spontaneously upon the free surfaces of the serous membrane, and thus at once prevents the ill effects of further friction. It is impossible but that the irritation must be considerably increased if inflamed serous membranes are allowed constantly and freely to rub upon each other; but by the coagulation of the lymph upon the free surfaces, they are protected against direct friction, as in the case of the opposed surfaces of the abdominal viscera and the parieties, or as in the heart and the opposed surfaces of the pericardium. As soon as the lymph is poured out, the serous membrane is put, as far as it can be, in a state of rest, or freedom from friction, and when the original disturbing cause has become exhausted or removed, then I apprehend that, in consequence of the rest which the serous membrane has experienced through the effused lymph, it is able to recover or resume its normal function of rapid absorption. Thus we see the effusion apparently performing two purposes—preventing the friction between the two inflamed surfaces, and that, being accomplished, giving the original disturbing cause, whatever it might have been, a fair opportunity of removal. Here the rest has so far contributed to the restored integrity of the serous membrane, that it has enabled it to recover its natural function—that of rapid absorption, and the first act of its renewed health and vigor is to absorb that effusion which was the primary result, whatever the disturbing cause might have been. Thus, then, the lymph prevents friction, and aids absorption, and in this way, I apprehend, Nature does her best to repair her own injuries, whether they be the result simply of accident or other excitants of the inflammatory condition.

The process of absorption I will not enter upon to-day except so far as it may be necessary for me to explain why I have brought this model of the lymphatics of the upper extremity for your inspection. Absorption takes place through the medium of the veins as well as of the lymphatics, and I thought by mentioning here the mode in which this preparation was obtained, I might, perhaps, open the door for a little inquiry as to what may be the possible communication between the capillaries, arteries, veins, and the lymphatics. The original preparation was made by myself in 1838. I was at that time hard at work in the museum of Guy's Hospital, dissecting for the various models now in Guy's museum. I had observed that when a limb was œdematous, the lymphatics were very clearly distinct, and I thought if I could imitate that by making the limb œdematous after death, I might succeed in making the lymphatics tolerably distinct. I accordingly injected water through the medium of the trunk artery of the limb, until the water came back clear by the veins. Seeing that, I put a ligature upon the veins, and continued to pump water into the artery, when all the lymphatics became filled. I took the skin off carefully, and every one of the lymphatics which you here see modeled was filled with mercury by myself; when filled they were carefully dissected and copied. Thus the drawing expresses, as far as it goes, all the lymphatics of the upper extremity. We have, then, clear evidence that there is a communication capable of being established, not as a vital process, but after death, between the lymphatics and the veins and arteries. Whether that communication is through the medium of tubes, or by transmission of fluid through the parietes of the lymphatics, I cannot tell; but it must be a result of a simple mechanism, not of any vital endowment, because it may be perfectly imitated after death. This statement is my excuse for bringing the model before you.

For the moment I would ask you to bring to your recollection what happens when a mucous membrane is inflamed. When a mucous membrane is very much inflamed, coagulable lymph is poured out upon its free surface, and from that moment the membrane is defended from the influence of external agents. In the case of the larynx and trachea, it prevents the contact of the irritating external air passing over the inflamed surface, and in that way gives the mucous membrane rest. And when the disturbing cause, whatever it may have been, has disappeared, the mucous membrane having had this advantage of rest, the secreting glands and follicles recover themselves, and pour out a fluid between the mucous membrane and the effused lymph; the latter is thus separated, pushed off from the internal surface, and becomes expectorated. This is seen in the little preparation before me. Here is a portion of lymph partially separated by nature, as the result of the rest which the mucous membrane seems to have obtained by the effusion of the lymph. These glands and follicles, when inflamed, do not secrete their fluid normally, either in quality or quantity. By means of rest, however, they have the opportunity to recover themselves, and when they have done so, their abundant and natural secretion is interposed between the mucous membrane and the lymph. The lymph is thus pushed off, and becomes expectorated or swallowed; or sometimes, in the case of acute inflammation attacking the mucous membrane of the intestines, you may see long tubular portions of solid lymph discharged from the bowels, having at first sight the appearance of the intestine itself; but, upon post-mortem examination, it will be found that the originally inflamed portion of intestine has perfectly recovered itself, and has pushed off the lymph from the interior, precisely in the same way that these glands secrete their fluids and push off the lymph from the interior of the larynx and trachea. I cannot go further in this direction, but I thought it right to mention these circumstances to show that, with serous membranes and mucous membranes, a right interpretation of Nature's efforts demonstrates that there are, even when these structures have suffered from a severe inflammatory condition, indications of attempts on her part to secure rest to these membranes, and thus contribute to a favorable issue.

As a preliminary to my observations on the beneficial influence of rest in the treatment of diseases of the spine, it will be instructive to remember that accurate diagnosis and early recognition of disease constitute two important steps to successful treatment. It will be advisable, therefore, that I should preface the subject of spinal affections with some few clinical remarks on pain as a symptom of disease.

When a patient is suffering from pain in any part, he is instinctively inclined to believe that he must be also suffering from inflammation in the same part. Pain, as we all know, is not by itself an indication of an inflammatory state, nor is redness, nor is swelling; for any or all of these may co-exist without local inflammation. The true sign indicative of a local inflammatory condition is increase of temperature or heat; and taking that as a single symptom, it is most striking and valuable in reference to diagnosis as to whether a part is actually in an inflammatory condition or not. For example, if we apply the hand to the surface of an ulcer, nothing is easier than to determine whether it is inflamed or not; its true character may be at once recognised. In the minds of some surgeons there may be considerable difficulty in distinguishing what is termed an inflamed ulcer from an irritable ulcer; both look red and congested, and both are painful; but by placing the hand upon the surface of the ulcer, and observing the increase of temperature in it and its immediate neighborhood, the inflammatory nature of the local malady is rendered evident. The real and essentia pathological condition of an irritable ulcer I hope prove to you before I have finished these lectures We must admit that the employment of the hand for the purpose of recognising increased or diminished or normal temperature is a matter of great importance towards determining the state of a diseased joint. It often happens that although a whole joint may apparently be unsound, yet there are certain parts of it which may manifest inflammatory symptoms more distinctly than others. By the hand these localities can be ascertained. This is useful knowledge, as clearly indicating the precise points where leeches, blisters, or counter-irritants should be applied. So I would submit to you that if, in very young children, this little (oftentimes repudiated) symptom of heat or increase of temperature had more credit given to it, and was more frequently employed, its diagnostic value would soon be appreciated. Suppose a little child to be lame: it may be very difficult for the surgeon to tell with precision the exact seat of the cause; but if, with his mind intent upon what he is doing, he pass his hand carefully, slowly, and gently over the whole surface of the limb, he will detect, by the increase of temperature, whether or not there be an inflammatory condition in any particular spot. It was in anticipation of what I am about to state with regard to the true relation of pain as a symptom of disease, that I have deemed it not out of place to make any observations so elementary.

Pain in any part, when not associated with increase of temperature, the local symptom of local inflammation, must be looked upon as sympathetic pain, an exalted sensitiveness of the nerves of the part, and it is to be regarded as a pain depending upon a cause situated remotely from the part where the pain is expressed. In availing ourselves of these so-called sympathetic pains, (and no doubt they are in a certain sense sympathetic pains,) I should like to displace, to throw aside, the term "sympathy" as something too ideal, and would ask you to consider such pains in their obvious, intelligible, and more natural relation. I would solicit you to mark them, as resulting from some direct nervous communication passing between the part where the pains are expressed and the real and remotely situated cause of the pain.

I admit that I formerly looked at this subject very loosely, so that if a patient complained of pain between his shoulders, or anywhere else, I never asked myself, What association of nerves will explain this pain? But, beyond doubt, that is the proper way of regarding this question. If there be pain, with its hidden cause, in any one particular spot, it can only be by tracing the nerves of and from that spot that we can hope to arrive logically at the real cause of the symptoms, and so divest the case of its obscurity. Applying this method to practice, it is through the medium of the distribution of the cerebro-spinal nerves of sensation (the fifth nerve being the true cranial sensitive nerve) that we are enabled to explain those pains which are called sympathetic, but which result from a continuity of nerves between the cause and the effect, the disease and the symptom. It is impossible, I believe, to affix too much practical significance to, or over-estimate the value of, this simple statement regarding the relation of pain as a symptom of disease to the diagnosis of the kind of case in which pain forms a prominent symptom.

When a patient complaining of pain applies to a surgeon, the surgeon ought to seek the real cause. He ought not to be satisfied, as is too frequently the case, with saying, "Oh, it is rheumatism"—the favorite phantom. "You have caught a cold;" "you have been standing in a draught of air;" "it is the easterly wind, which has been lasting so long—wait till the wind changes;" "it is gout." The patient says, "It cannot be; I live so carefully." "But," says the surgeon, "you have inherited it from your father or your great-grandmother; or you must have had a blow upon the part some time ago, but which you do not recollect—that is all."

Now, external pain, or pain upon the surface of the body, may be considered, if properly appreciated, as an external sign or demonstration of some distant derangement. If the pain persists,—if it does not depend on any transient cause,—it becomes necessary to seek the precise position of the pain; and, as soon as we recognise the precise position of the pain, we are enabled, by knowing the distribution of the nerve or nerves of that part, to arrive at once at the only rational suggestion as to what nerve is the exponent of the symptom; and by following centripetally the course of that nerve, and bearing in mind its relation to surrounding structures, we shall, in all probability,—indeed, most likely,—be able to reach the original—the producing—cause of the pain, and, consequently, adopt the correct diagnosis.

Patients judge most frequently of the position of their own disease by the situation of the painful symptoms most prominent or most palpable to their senses; whilst we surgeons, relying upon our knowledge of the true cause of the symptoms, judge of the seat of the disease by a just interpretation of the symptoms through the medium of normal anatomy; and we know by experience that such symptoms may exhibit themselves at, or far removed from, the actual seat of the disease; this latter remark being peculiarly applicable or pertinent to the subject of disease of the spine.

In illustration of this position, I may mention an instance that occurred to me some years ago in Guy's Hospital. A patient was admitted, under my care, with disease of the spine. He had lost the power of motion in his lower extremities, and his sensation was very much diminished below the pelvis; but he complained of excessive pain over the lower part of the abdomen and pubes. It was there, he believed, his complaint to be; and I failed to convince him that there was not any disease at that spot.

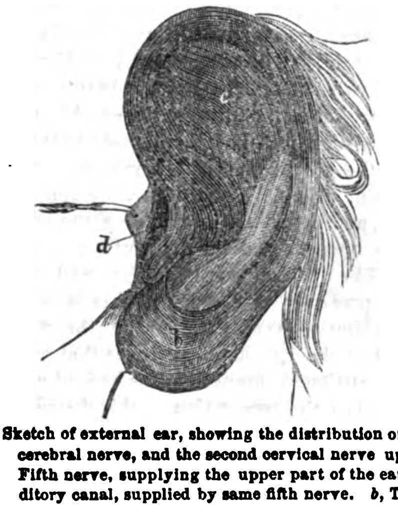
Here I might incidentally remark on the close proximity of the two distinct nervous conditions of diminished sensibility and pain, as exemplified in this patient's case. Below the pelvis he had a very much diminished sensibility; but just above that point he suffered excessive pain. This is in strict accordance with what is observed in injuries of the spinal marrow, where a person may be completely paralysed both as to sensation and motion; but a little higher up than the original seat of injury, there may be exquisite sensitiveness, the patient suffering extreme pain. Let me put it mechanically before you in this way. Suppose a fracture of the spine, with complete loss of sensation, below a certain spot. A little higher than that spot the sensibility is not very distinct, and, a little higher still, the skin is exquisitely sensitive; and if the patient dies, we shall probably find that the nerves that supply the skin where the pain is experienced are attached to the upper portion of the injured spinal marrow, near the seat of injury, and which is at the moment in an inflamed condition. This is the reason of the exalted excitability of that part immediately above the seat of the loss of sensation.

In this case I tried repeatedly to assure the man that there was no disease where he had the pain—that that was not the seat of his disease; but I made no impression on his precocious penetration. I ordered tartar-emetic ointment to be rubbed over the diseased portion of the spine; but the patient would have it that the ointment ought to be applied where the pain was. He accordingly rubbed it in thoroughly over the lower part of the abdomen, amongst the hair of the pubes, and upon the penis and scrotum; and, I need not tell you, he suffered considerably for his scepticism and his obstinacy. Of course the pain was not in the slightest degree relieved. In this case the pain was situated at the lower part of the abdomen, over the pubes; but the real cause was disease of the vertebræ. After a time the man got perfectly well, although he had been paralysed, and nearly lost sensation in the lower extremities, the treatment having been simply rest—nothing else, and attention to his general health whilst lying in bed.

When this patient was first seen by a surgeon, he was thought to be laboring under some disease of the bladder and kidneys; for he had severe lumbago, pain over the bladder, and offensive urine. There had been no suspicion of anything wrong as regards the spine. He was a master painter and house decorator, and was monstrously conceited, thinking himself right and everybody else wrong. When I explained to him, after careful examination, that the spine was the cause of the symptoms, he was not satisfied with my opinion, and consulted, without my knowledge, Sir Benjamin Brodie, who also assured him of his spine disease, and told him that he must est his spine by lying down. To this he then assented. As he could not be controlled in his own house, I persuaded him to go to Guy's Hospital, where he got nearly well; but he was very impatient, and would not remain long enough under my care to be quite cured. He returned home, and gradually improved, and was getting quite well, when some pseudo-friend advised hydropathy and homœopathy as "the thing" to cure him—it did not matter which of the two. After a few months he was perfectly restored, no doubt by Nature, and not by either hydropathy or homœopathy. The man, however, feels convinced that hydropathy or homœopathy cured him. So it happens, gentlemen, sometimes that we do not get the degree of credit which perhaps belongs to us. Only the other day, I had a handsome present sent to me from a young lady—a pair of crutches which I had lent to her some four or five years ago. She had then severe disease of the hip-joint. I gave myself a great deal of trouble about her, and I believe I placed her joint into a comparatively healthy condition. Her note to me was—her compliments, and she sent back the crutches, having got well, after five months' treatment under a distinguished rubber at Brighton. She had been under my care for a considerable period, and, by five months' further rest and quiet at Brighton, no doubt she completely recovered.

In elucidation of this statement, and of my conviction as to the value of pain as a symptom in relation to diagnosis, let me put the subject in a plain and practical way. You know that the upper and anterior part of the external ear and the auditory canal derive their sensibility from the fifth cerebral nerve, which has its direct nervous associations with the interior of the head, the forehead anteriorly, the temple, face, eyes, nose, teeth, and tongue; whilst the posterior part and the anterior part of the pendulous portion of the external ear derive their sensitive nervous supply from the spinal nerves issuing from the spine between the second and third cervical vertebræ. It may appear to some of my anatomical friends rather remarkable that I should have depicted by coloration the precise distribution of the two sensitive nerves supplying the exterior auditory apparatus. It arises out of a curious circumstance. Some time ago I was anxious to depict this piece of anatomy from my own dissections, but I did not feel quite satisfied as to the exact line of demarcation where the cervical nerve supplied the skin of the ear and where the fifth nerve was distributed. A short time since, a man, who is now undergoing the punishment of penal servitude, attempted to cut his wife's throat. In drawing the razor across her neck, he divided the auricular branch of this second cervical nerve, and gave me the opportunity of ascertaining the distribution of that nerve. My dresser, as well as myself, pricked with a needle over the whole of the auricular surface, and ascertained minutely the precise position of the loss of sensation consequent upon the division of the cervical nerve; whilst the skin which retained its sensation indicated with equal precision the distribution of the fifth cerebral nerve upon the external ear.

FIG. 9.



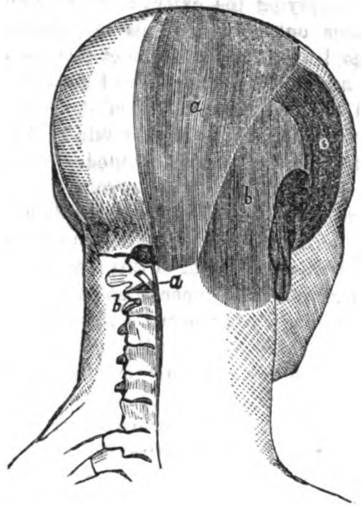
Sketch of external ear, showing the distribution of the fifth cerebral nerve, and the second cervical nerve upon it. *c*, Fifth nerve, supplying the upper part of the ear. *d*, Auditory canal, supplied by same fifth nerve. *b*, The part of the ear supplied by the second cervical nerve.

When a patient, then, tells us that he has earache, or pain in or upon his ear, we ought to ascertain whether it is pain upon the back part of the ear, or whether it is in the auditory canal, or upon the anterior and lower portion of the ear; because it is obvious that the real cause must be widely different in the two cases. If the patient has pain in the auditory canal, or the upper portion of the anterior part of the external ear, the pain must be, without question, (I hope I shall not be considered as putting this too dogmatically,) the result of some irritation or diseased condition or cause associated with the fifth cerebral nerve, and this gives precision to further inquiry.

Now, we know very well that there is often a simultaneous occurrence of toothache and earache. The same nerve supplying the auditory canal and the anterior portion of the ear supplies also the teeth; hence, in all probability, this sympathetically associated influence. I think you may take a further step in the other direction, and say that earache is often accompanied with a stiffness of the jaws, the fifth nerve supplying the masticatory muscles which fix the jaw. So we know perfectly well that disease affecting any part of the anterior third of the tongue is a very common cause of pain in the auditory canal, the tongue and the auditory canal being supplied by the fifth nerve. These auricular pains are pretty constant in cases of malignant disease attacking the side of the tongue or the part toward the apex. Local morbid conditions are sometimes induced by irritating secretions resulting from the free nervous communication between the different parts which derive their sensibility from the fifth nerve.

A professional friend had an enlarged gland below the external ear. The real cause of this was not quite apparent, and so he requested me to look at it. There was a slight discharge of morbid secretion in the auditory canal. We argued the question together, and I said, "Very likely it may be the result of a decayed tooth. Irritation from it may be conveyed to the auditory canal, and induce this morbid

Fig 10.



a, First cervical nerve. *b*, Second cervical nerve. *a'*, supplied by first cervical. *b'*, Supplied by second cervical. *c*, Supplied by fifth pair.

secretion; that morbid secretion may produce slight excoriation, and that excoriation, aided by lymphatic absorption, may explain the existence of the enlarged gland." The tooth was extracted, and all the other local morbid conditions disappeared, and there was no recurrence of these local symptoms.

In order to show the practical application of the views I have just advanced, I may mention a case that occurred last year. A gentleman, aged sixty-three, came to consult me regarding an ulcer situated upon the left side of his tongue. On examination, I there found an elongated, very ugly-looking ulcer, nearly as large as a bitter almond, and of much the same shape. The surrounding parts were swollen, hard, red, and much inflamed, and a lymphatic gland was enlarged below the horizontal ramus of the lower jaw on the same side. I saw in the mouth a rugged tooth, with several projecting points upon it, opposite the ulcer. This gentleman observed to me, "Having suffered a good deal from earache on the left side for a long time, without experiencing any relief from medical treatment, it was thought that I must be gouty, and I went to a surgeon who treats gouty affections of the ear. This surgeon paid great attention to my ear, but certainly did not do it the slightest degree of good. I accidentally mentioned to him that I had had for some time past something the matter with my tongue. On seeing it, he immediately began to apply caustic vigorously; moreover, not satisfied with applying it himself, he gave it to my wife, that she might apply it at home. I have gone on this way from day to day until the pain in my ear is very considerably increased, and the ulcer on my tongue is enlarging: so I have come to you for your opinion regarding my state: for, to tell you the truth, I am afraid of a cancer on my tongue." I thought I saw the explanation of this patient's symptoms. The pain in the ear was expressed by the fifth cerebral nerve, and there was a rugged tooth with little projections upon it, some of which opposed and touched a small filament of the lingual-gustatory branch of the fifth cerebral nerve in the surface of the ulcer. I detected this little filament by placing upon it the end of a blunt probe. It was situated near the centre of the ulcer, and was by far its most exquisitely painful part. This exposed nerve caused the pain in the auditory canal which led him to go to the aurist, and the aurist, instead of confining himself to his own department, seized the tongue, put nitrate of silver upon the whole of the ulcer, and increased the mischief. I simply desired that the ulcer should be left at rest; that the patient should not talk nor move his tongue more than necessary, so as to avoid touching the tooth; that he should wash his mouth with some poppy fomentation, and take a little soda and sarsaparilla twice a day. In three days about one-third of the ulcer was healed up, actually cicatrized, the enlarged gland nearly gone, and the earache much diminished.

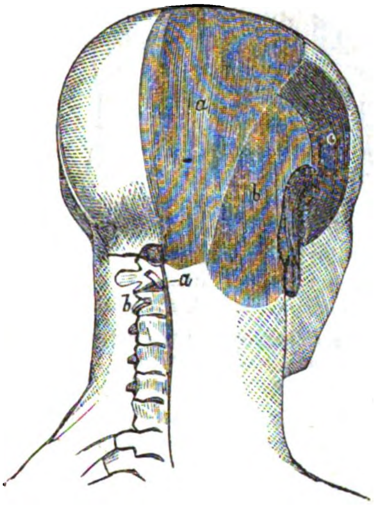
This rapid improvement might appear something like exaggeration, but all surgeons know that the tongue has those elements within it which contribute to the most rapid repair of injury. I do not know any tissue that repairs itself more rapidly. It is abundantly supplied with capillaries filled with arterial blood, and has an enormous distribution of nerves, and those are the two elements that contribute to rapid reparation. It was quite clear that the treatment was in the right direction—viz., that of giving rest to the tongue and ulcer. After a few more days I requested him to consult a dental surgeon with respect to the propriety of taking off the points of the tooth. This was afterwards done, and the patient soon lost his anxiety about cancer, his earache, and all the severe indications he before had experienced.

I mention this case to point out the value and importance of recognizing the precise distribution of the nerves of any part where a patient is suffering pain. I thought I might take the surface of the external ear as a pretty accurate illustration of what I intended to convey. Last July a patient came to me with earache. The pain was on the lower part of the ear—not the upper part, nor in the auditory canal. Looking at the neck, I saw a little swelling there, and the patient said, "Oh, that is only a kernel which comes down sometimes. I have been under my surgeon's care for some time for the ear, but am no better." It struck me that the kernel or gland, lying close to the second cervical nerve, was the cause of the pain. Hemlock poultices were applied over the gland, and in a week or so the gland suppurated; it was opened, and the painful symptoms disappeared. The patient had earache, and the symptoms were precisely expressed. There was no pain in the auditory canal supplied by the fifth nerve; the part of the ear implicated was that connected with the auricular branch of the second cervical nerve. It was the recognition of this distribution of the nerves to the ear which gave me the opportunity of detecting the real cause of the painful symptoms.

These cases support the opinion that accurate information respecting the exact seat of pain is a very important step towards obtaining a correct diagnosis.

Again, with respect to pain upon the head. Suppose a person to complain of pain upon the scalp, is it not very essential to know whether that pain is expressed by the fifth nerve, or by the great occipital? If it be expressed by the fifth nerve, it must be placed somewhere in front of the head, for all the anterior and lateral part of the head is supplied by the fifth nerve. Thus pain in the anterior part of the head would suggest that the cause must be somewhere in the area of the distribution of the other portions of the fifth nerve. So if the pain be expressed behind, the cause must as assuredly be connected with the great or small occipital nerve, and in all probability depends on disease of the spine between the first and second cervical vertebræ.

FIG. 10*.



This diagram shows a posterior view of the head, with the distribution of the great occipital nerve, the small occipital nerve, and the temporo-auricular branches of the fifth cerebral nerve. The cervical vertebræ are seen in outline. Between the first and second vertebræ is seen escaping from the vertebral canal the great occipital nerve, and from between the second and third vertebræ the small occipital nerve. *a*, Great occipital nerve, its trunk divided. *a'*, Cutaneous distribution of the great occipital nerve. *b*, Small occipital nerve. *b'*, Cutaneous distribution of the small occipital nerve to the head and external ear. *c*, Temporo-auricular branches of the fifth cerebral nerve.

I add these illustrations in order again to fix in your minds the importance of ascertaining the exact seat of the pain of which a patient may be complaining. It is not enough to say that he has pain upon his scalp; we must know precisely on what part of the scalp. It is not enough to say that he has pain in his ear, but upon what part of the ear; because there are two distinct nerves connected with these two different parts. I advance these local illustrations to indicate the method of exploration of the causes of pain, in whatsoever part of the body they may occur, although my remarks here are applied especially to the surface of the body.

Sympathetic pains on the surface of the body, connected with derangements of the internal viscera, are of great and pressing interest to us. I conceive that pains situated upon the surface of the body, and associated with something grown in an internal viscus, must be looked upon as a beneficent provision, enabling us to receive the information and to appreciate by external pain slight organic changes or derangements of function of the internal viscera; otherwise, and without some such reference, it seems difficult to understand why there should be structural nervous communication, and thence pain, upon any part of the surface of the body, consequent upon any pathological state of internal viscera or internal parts of the body.

Perhaps one of the most frequent of the so-called sympathetic pains experienced is that which occurs between the shoulders, or over the inferior angles of the scapulæ. This pain must be connected with the distribution of some of the spinal nerves, because no other structures could express the pain, and no other nerves occupy that position except the fourth, fifth, and sixth dorsal nerves, which are distributed over the inferior angles of the scapulæ and interscapular space; hence we must conclude that these nerves are the immediate seat of the pain. If we trace internally the great splanchnic nerve from within, thorax downwards, and find it connected at its abdominal end with the solar plexus, thence trace its distribution to the stomach, duodenum, liver, and pancreas; and if we follow the other or upper end of the same great splanchnic upwards to the fourth, fifth, and sixth dorsal nerves, which give peripheral sensitive filaments to the integuments, over the angles of the scapulæ, to the interscapular spaces and the adjoining skin, one can well imagine (without going into the question of how the transmission is made) that these nerves carrying the influence upwards and backwards may explain the occurrence of the pains sometimes experienced in those external parts associated with abdominal visceral disturbance. I think it likely, then, that the pain which persons experience in disease of these viscera may be explained by the relative position of the great splanchnic nerve, communicating, on the one hand, with the solar plexus, and thence with these digestive organs, and, on the other, distributing its branches to the fourth, fifth, and sixth dorsal nerves.

I have detained you with these general, but I hope pertinent, remarks on the subject of pain in anticipation of their more exact application to cases of well-defined disease of the spine. As in accidental injuries to joints, so in accidental injuries to the spine—as in diseases of the joints so in diseases of the spine, mechanical rest is an essential part of the treatment, and on this account it is to be steadily pursued. And here I must state my belief that a majority of the cases of primary disease of the spine in children, and almost all those in adults, are the results of exercise persevered in after fatigue—that is, after muscular exhaustion, or of accident, unacknowledged or overlooked. This, I think, is opposed to general opinion, which affixes tubercular disease or scrofula to disease of the spine in children as its almost invariable cause. The earlier the detection of spinal disease the more successful will be its treatment by appropriate rest. I trust I shall not be thought too sanguine when I assert it to be my firm conviction that if diseases of the spine were recognised sooner than they usually are, (and I am confident they may be,) most of the cases would be cured by properly applied rest. If the disorder is allowed to proceed until deformity is manifest, as in hip-joint disease, then assuredly the difficulties of the case are much increased, and the prospect of a favorable result much diminished, though not by any means destroyed.

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* This figure is again introduced in consequence of its close relation to the cases detailed in this part of the lecture.

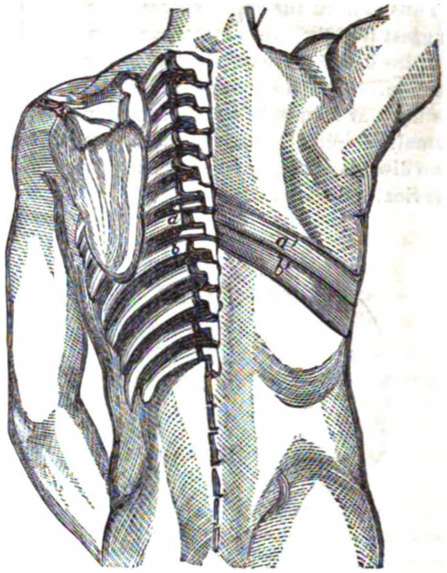
In the cases of inflamed joint, we can discover its actual condition through the existence of a single local symptom—viz., increase of temperature in the parts. So, in disease of the spine, there is one symptom which almost always stands out most prominently, I would almost say soliciting our right appreciation and apprehension, and that is, local and fixed pain upon the surface of the body, with or without exacerbations, local increase of temperature being absent. I feel quite certain that through the medium of this symptom, properly employed, we may be led to the recognition of morbid conditions of the spine long before there is any evidence of disease by palpable deformity.

Diseases of the spine may begin in the vertebræ or in the intervertebral substance—I think, upon the whole, most frequently in the intervertebral substance, or where this is joined to the vertebra. This rather supports the view that diseases of the spine are very often the result of accident, because we know that in accidents, at least so far as I have been able to discover, the most frequent severance in injury to the spine is a severance of the vertebra from the intervertebral substance; and I suspect the same thing obtains with respect to disease of the spine. The pain associated with diseased spine to which I now refer is found upon the skin, supplied by the nerves which escape from the vertebral canal through the intervertebral foramina, close to the bones or intervertebral substances, either of which may, as I have said, be the seat of the disease. It is upon the recognition and right interpretation of the cause of this pain upon the surface of the body that we ought to place the best prospect of early and correct diagnosis in spinal disease.

In disease of the lower cervical, dorsal, and lumbar regions of the vertebral column, the pain is usually expressed symmetrically—that is, on both sides alike. It is often however, not so when the disease lies between the occiput and atlas, or between the first and second cervical vertebræ. In all cases of symmetrical pains the cause is central or double, both sides being in a like morbid condition, whatever the disease may be. I have had these sketches made for the purpose of reminding you of the method of proceeding in analyzing the cause of symmetrical pains. I will select two of the dorsal nerves for the purpose of illustration.

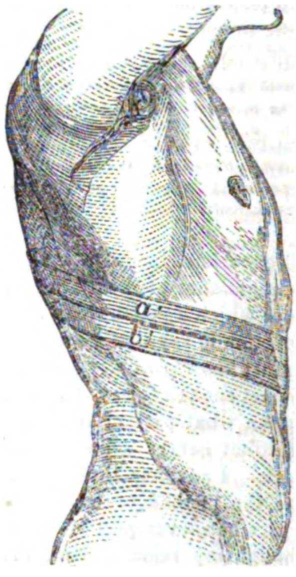
Here are indicated the position of the sixth and seventh dorsal nerves, as they are distributed to the skin just over the pit of the stomach. If pain be felt at that part alike on both sides of the median line, these nerves become the only possible expression of that cause, for there is no other structure there situated which could manifest the pain; then

FIG. 11.



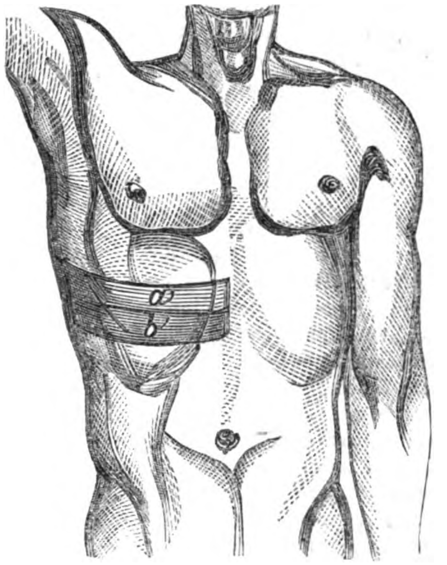
A posterior view, showing the vertebræ and ribs in outline, with the sixth and seventh dorsal nerves in section between their vertebræ. *a*, Seventh rib, with the sixth dorsal nerve above it, and lying between sixth and seventh vertebræ. *a'*, Cutaneous distribution of sixth dorsal nerve. *b*, Eighth rib, with the seventh dorsal nerve above it, and lying between seventh and eighth vertebræ. *b'*, Cutaneous distribution of the seventh dorsal nerve.

FIG. 12.



Side view of the chest, showing the course of the sixth and seventh dorsal nerves.

Fig. 13.



Front view showing the terminal cutaneous distribution of the sixth and seventh dorsal nerves upon the abdominal parietes over the stomach.

by tracing the nerves producing these surface-pains backwards to the posterior median line, and noting accurately the healthy or unhealthy condition of the various structures near which these intercostal nerves would pass—such as the ribs, pleuræ, aorta, œsophagus, and other structures in the posterior mediastinum,—we arrive at the vertebræ and spinal marrow, and in that way, proceeding by the law of exclusion, we arrive at the diseased spine as the real cause of the pains experienced at the pit of the stomach. (See Fig. 13.)

I would now show the application of this method to practice, as illustrated by a case which I saw in 1851. On the 18th of March of that year, Mr. Ray, of Dulwich, brought to me a boy, eight years of age, who had been suffering from severe pain during January and February, 1851, just above the pit of the stomach, and who used to walk about with his hands placed over that region, and the body a little inclined forwards, as if suffering from some irritation or pain of the abdominal organs, in which direction the treatment had hitherto been chiefly applied, but without much benefit. It was noticed that the pain increased during the maintenance of the erect posture, and that it was relieved by the recumbent position. The child was old enough to express a little of what he felt, and when asked where the pain was, he put both his hands over the stomach, where he had previously complained of pain, and we observed that the pain was expressed on both sides alike. Mr. Ray and myself agreed that it was over the peripheral distribution of the sixth or seventh dorsal nerves. I requested that he should be undressed, so that we might be able to examine his spine. We then found that there was disease, with slight displacement, between the sixth and seventh dorsal vertebræ, and pressure upon these vertebræ produced the pain in front. The child could give us no explanation of the symptoms. No known accident had occurred; but the seat of the mischief, or the cause of the symptoms, was strongly marked by his placing both his hands in the position which I have described. The real cause of this patient's symptoms was now apparent, and by putting the boy upon a hair mattress on his back—that is, by giving the spine rest during four or five months, he got quite well, without any local application to the spine. The improvement began immediately on his lying down, and it was steady and permanent. He only took some cod-liver oil. Since then he has had no returns of his symptoms, and is now grown up a healthy lad.

In this case, when we traced the dorsal spinal nerves backwards, or centripetally, we arrived at the cause immediately, and having recognised the cause, there was no difficulty about the treatment. In March, 1860, Mr. Ray reports to me: He is now seventeen years old, is strong, in good health, has not any deformity, and has not had any recurrence of his former symptoms.

I mention this case for the purpose of showing that lapse of time, and the accidental casualties of life, have not induced the reappearance of the disease, and of displaying how much useful information we may obtain in practice by a precise examination of the exact seat of pain under these circumstances.

About two years ago Dr. Addison was requested to see a gentleman's son, who was then at the Westminster School, and who, it was thought, had been suffering from something wrong in his abdomen, for he had pain at the pit of the stomach and occasional vomiting. Not observing that the tongue and other circumstances indicated much serious disturbance in the neighborhood of the liver, stomach, duodenum, and other parts in that locality, he suggested that there might be something amiss as regards the spine. I was therefore requested to see the lad with Dr. Addison. I found that he had precisely the same pains (as those observed in Mr. Ray's case to which I have been referring) over the pit of the stomach, and that he was *easy when lying in bed*. He was a rather tall, growing lad, and it was thought that the pain and spinal disturbance resulted from his sitting on a form at Westminster School without having any means of supporting the back. We believed we recognized disease of the spine exactly between the sixth and seventh dorsal vertebræ. All the stomach medicines were entirely put aside. He was made to lie down on a bed, or on a sofa or couch in the drawing-room, for two or three months nearly uninterruptedly, and from that time he got perfectly well. No cause could be made out for the disease of the spine, except that as he was a tall, growing lad, it might have been induced by sitting daily too long upon the form, without any support to his back, at the Westminster School. The source of the mischief was here accurately diagnosed by observing the precise position of the pain. There was no evidence of a local inflammatory condition where the pain was expressed. It was clearly a pain dependent upon a cause *situated remotely* from the point of manifestation. Traci the pains backwards, we came to the seat of the disease, and then, by adopting rest as an agent, the boy was ultimately cured.

Last spring I saw a gentleman, who was brought to me by a surgeon, with something wrong in his back. I was not told what it was, but was requested to examine him. I asked the patient whether he had any pain to complain of. He said, "Yes, I have pain hereabouts," pointing to the distribution of the fourth and fifth dorsal nerves on the chest. The pain was on the one side only, not symmetrical, which led me to conclude that the cause was one-sided. Upon tracing the posterior course of the fourth dorsal nerve towards the spine, I recognized a distinct aneurismal bruit. This led me to conclude, as a physician had before concluded, that the patient was the subject of aneurism. I mention this case, not for the purpose of prolonging, or parading unduly, the subject, but merely to show what precision this method of examination gives.

If a patient complains of pain on the surface of the body, it must be expressed by the nerve which resides there; there is no other structure that can express it, and somewhere in the course of its distribution between its peripheral termination and its central spinal or cerebral attachment must be situated the precise cause of the pain expressed on the surface.

Original Papers.

AN ACCOUNT

OF A CASE OF RUPTURE OF THE UTERUS DURING LABOUR,

IN CONNEXION WITH

FOLLICULAR DISEASE OF THE CERVIX UTERI AND CONSECUTIVE FIBROUS DEGENERATION OF THE MUSCULAR TISSUE.

By Edward Latham Ormerod, M.D., F.R.C.P.,
Physician to the Sussex County Hospital.

The woman from whom this uterus[*] was taken was thirty-six years old, large and well made, but singularly pale; she had, however, always enjoyed good health. She had borne seven living and five dead children at the full time, and, besides these, had miscarried at the sixth month in the previous year. The first stage of her labours was always very tedious, and increasingly so with each successive labour. She had never suffered from uterine hæmorrhage; it was not known whether she had habitual leucorrhœa, or had ever suffered from syphilis.

About three months before the fatal issue of this her fourteenth pregnancy she was suddenly taken with seeming labour pains—with the same symptoms, in fact, as had ended in a miscarriage at the sixth month in the preceding year. These pains continued severe for twenty-four hours, accompanied by the discharge of a large quantity of offensive fluid; they then ceased, and her pregnancy went on, without any further incident, till nearly the full time,—namely, a fortnight before her death. Then it seemed as if labour fairly set in, for from that time she had a constant succession of regular pains, continuing day and night, so as to quite interrupt her sleep. She had an abundant discharge of fluid at the outset, which she supposed to be the waters coming away; and this continued throughout the whole fortnight, only in less quantity.

However, she was used to matters proceeding very slowly, and did not even send for her nurse till the pains came on with more violence nine hours before her death. Her nurse was with her at nine P.M., and at eleven she sent to tell Mr. Fry, her usual attendant, that she should soon want his assistance. She was then lying in bed, very cheerful, and expecting a speedy delivery. Before Mr. Fry's arrival, however, a great change had taken place in the patient; for at twelve o'clock he found her collapsed, and, on examination, was unable to ascertain the nature of the presentation. From his former experience of the case he thought that there would be much delay, and, not being well, he left at half-past twelve, requesting Mr. Sewell to take charge of the case.

About twenty minutes, certainly not more, elapsed before Mr. Sewell's arrival; but a further change had taken place in the patient in the interval, though still without any sudden violent symptoms. She was then lying on her side, imperfectly conscious and very faint, and all uterine action had ceased. Mr. Sewell tried to ascertain the presentation, but could not reach the os uteri; and within a minute or two of his arrival she had ceased to breathe. There was no external hæmorrhage whatever.

On examination of the body after death, the peritoneal cavity was found to contain more than five pints of blood, in which lay a full-grown female child placed transversely with its feet to the right. There was no mark on the child by which the nature of the presentation could be determined. The uterus was ruptured straight down the posterior wall from top to bottom, the tear stopping just short of the cervix, and not implicating the vagina at all. The cervix was somewhat everted, so that what seemed to be the os uteri was really part of the canal of the cervix, occupied, in four-fifths of its circumference by an elastic growth, which was of a somewhat gelatinous appearance, and was studded here and there with little bladdery points. The entrance to the uterus would not allow the passage of a cone of more than one inch and a half diameter. The muscular substance of the uterus was generally soft and flabby, but otherwise healthy-looking. Large flakes of healthy decidual membrane hung from the interior of the uterus. The placenta, which lay loose in the peritoneal cavity, seemed to have been attached on the left side, about half way up the organ. No corpus luteum distinctly referable to this pregnancy could be found in either ovary. The dimensions of the pelvis were quite normal.

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[*] This pathological specimen I laid before the Brighton and Sussex Medico-Chirurgical Society on the 6th instant. It was kindly placed in my hands by Mr. Sewell as a contribution to our Hospital Museum; and I am also indebted to that gentleman, with Dr. Hall and Mr. Fry, for the particulars of the case.

Portions of the liver and kidneys, of the muscular structure of the heart, and of the uterus all along the line of rupture, were examined, and found free from any traces of fatty degeneration. The uterine muscular fibres about the fundus of the organ were quite healthy, bnt those taken from the edge of the rupture, near the cervix, did not display the muscular structure as distinctly as those from the fundus. They were smaller, darker, and apparently mixed with fibrous tissue, which connected them closely together, and gave them a woolly look. But there was no fatty degeneration anywhere.

On vertical section of the mass which grew from the interior of the cervix uteri, the structure had a honeycomb appearance, from a number of irregularly cylindrical cells, distended with a clear mucus, swelling up from the cut surface. The general appearance of the cells was very like that presented on section of a compound ovarian cyst, the white, opaque, fibrous septa contrasting with the transparent contents of the cells; only these cells were arranged parallel to each other, at right angles to the uterine structures, and they were somewhat oval, not radiating and pyriform as in an ovarian tumour. The whole mass was nearly three-quarters of an inch thick, and the bladders, already noticed, on the surface, were the protruding ends of some of these dilated mucous follicles.

From the cut surface the mucus could be raised with the forceps in distinct masses, which retained the form of the original cells, and were evidently enveloped in a fibrous membrane of extreme delicacy. This membrane was wanting in the mucus which was squeezed out of the cells. In the transparent portion of this nothing could be seen besides a few small nucleated cells, either single or collected in patches; the opaque lines by which it was traversed here and there, were composed of epithelial scales, which were almost entirely of the columnar form, without any ciliæ at their broad ends. No cells leading to a suspicion of malignant disease, no pus or exudation cells, were anywhere to be seen.

The disease seems to have been simple hypertrophy of the glands of the cervix uteri, accompanied by fibrous degeneration of the adjacent muscular structure. It would be very difficult precisely to fix the origin and order of succession of all these changes in and about the cervix uteri, but it seems most probable that the constant afflux of blood, necessary to maintain so large an abnormal secreting organ as the hypertrophied glandular element grew to, was inconsistent with the normal periodical growth and decay of the muscular tissue hereabouts, and led to the formation of a more permanent structure in its place. The follicular disease was harmless enough in itself but, incidentally, its constant presence caused, or was accompanied by, a permanent change in the muscular structure, which interfered with the mechanical functions of the part, and thus gave rise to rupture of the organ. It was not the bulk of the tumour which caused the obstruction, but the rigidity of the tissues about the orifice of the womb.

Apparently, this condition of parts had existed for some years, gradually increasing till what in the first instance had merely delayed the dilatation of the os uteri ultimately impeded this process so effectually that the muscular structure ruptured itself in its fruitless efforts to overcome the resistance. It cannot be inferred that the hypertrophy and distention of the mucous glands of the cervix uteri were the consequence rather than the cause of the protracted labour, for the tumour did not implicate the whole circumference of the cervix, as might have been expected under such circumstances.

One other point invites examination: At what period did the rupture take place, and how? At eleven P.M. the patient was cheerful, and expecting delivery; at one P.M. she died. No information can be obtained defining the period within which the rupture took place more closely than this. The rupture would seem to have been gradual, for it is inconceivable that an injury of such extent, and accompanied by so much hæmorrhage, should occur suddenly without producing violent and immediately fatal symptoms. I am inclined to the conclusion, which the negative history of the case strongly favors, that the rupture and hæmorrhage were not instantaneous in all their extent, but that the uterus gave way at first only in a single point, and that the laceration was gradually dilated to its full extent by the passage of the child.

THE LARYNGOSCOPE:

ITS VALUE IN HEALTHY AND DISEASED CONDITIONS OF THE THROAT AND WINDPIPE.

By George D. Gibb, M.D., M.R.C.P.

Professor Czermak, lately of Pesth, but now of Prague, in Bohemia, paid a short visit to London in the last week of August, and took advantage of the opportunity to demonstrate the use of his laryngoscope at some of the hospitals, and at several private sittings, to many members of our profession. I spent the evening of the last day of the same month with the Professor, by special appointment, in company with Dr. Thudichum, and he favored me with a complete description of his most valuable instrument, and showed the use of it upon his own person, a brief account of which I thought of sufficient importance and novelty to bring before the readers of The Lancet. I must premise by stating that M. Czermak does not take to himself the credit of having been the first to invent the laryngoscope, for he was fully aware—as, indeed, he states in his work—that Mr. Liston had contrived something of the kind in 1840, and more lately M. Garcia (1855). He was not acquainted with Mr. Avery's instrument, which has been known to the profession, as I am informed, for many years. But he has perfected the instrument in every way, and has shown its application in the most satisfactory manner to both physiological and pathological researches. There are many instruments in London which are called Czermak's; some of these were shown to him, and he informed me that they were not his invention, and were widely different in their construction from his own. It is of importance to state this, because any one anxious to use the proper laryngoscope can obtain it from Weiss, in the Strand.

It consists of a circular mirror, perforated by a round hole in the centre, (indeed, like that of the ophthalmoscope, only that its diameter is greater;) and a small looking-glass reflector, on a stem and handle for introduction into the pharynx. The light employed may be either that of the sun, or of a good moderator lamp in a dark room; the latter is always at command. Clear daylight will answer. With a good light, the whole of the pharynx can be illuminated by the aid of this mirror, when the next step is to introduce the small reflector, previously warmed, into the pharynx, gently pressing it against the anterior part of the velum palati and uvula. This proceeding was carried out by M. Czermak in his own throat; and he regulated his movements by the aid of a second reflector, by means of which he himself saw what was being exhibited to the spectator. On his first introducing the small reflector, he repeated the ejaculations " Ah, ah!" "Eh, eh!" continuously, which permitted the epiglottis to be elevated during the expiratory efforts, and a good view of the interior of the glottis, with its vocal cords, to be obtained. The lips of the glottis would occasionally close and expand like a fan, the pivot being situated anteriorly; this, to my mind, is one of the most remarkable and striking features connected with the larynx in its healthy state. This movement was effected by the utterance of the sounds mentioned, and the rapidity with which it was accomplished was truly interesting and remarkable, and affords an idea of what this part of the vocal apparatus undergoes during speaking and singing. He showed me all the different parts of the larynx in a quiescent and active condition, and concluded this part of his demonstration in closing the glottis, by bringing the lateral surfaces of the cords together, and then gliding the arytenoid cartilages forwards into apposition with the base of the epiglottis. This last feature, as he assured me, was one of considerable difficulty to accomplish, and I could perceive that it cost him an effort to do it. It is represented in fig. 10 of the second plate of his work on the Laryngoscope, published this year in Paris.

Having rested himself for a few minutes, and partaken of a glass of sherry—an example which we all followed, as our own throats were shortly to be inspected,—he reintroduced the reflector, and altered the position of his neck and throat so as to permit of a view down the larynx. With some little arrangement a good posture was gained for the passage of the light downwards, and I saw clearly the rings of the trachea, and afterwards, lower down, the right and left bronchi, with the intermediate septum of a yellowish-white color, presenting a distinct light object between two apparently circular dark spaces. This is also engraved in his book—fig. 7 of plate 2. I must confess that, familiar as I had been with the idea of the actual passage of a probang so far down by Dr. Horace Green of New York—a feat which I knew was quite possible in such experienced hands—I little dreamt of the possibility of actually being able to *see* thus far down the larynx. There was no disbelieving the evidence of one's senses, but it was some time before I could certainly realize in my mind the fact of having seen, from the mouth, the bifurcation of the trachea in a living and healthy person. Whilst observing all these, I was fascinated with the intense interest of this novel subject, and was only afraid that I was taxing the good nature of the Professor.

He now showed me the posterior nares and Eustachian tubes, and all the parts in connexion with the former. The posterior edge of the septum of the nose stood out quite distinct, and the posterior terminations of the middle and inferior turbinated bones were well seen. The orifices of the Eustachian tubes presented circular concavities with raised margins, and certainly seemed different from what they are generally described. The upper part of the pharynx was shown by simply introducing a reflector looking upwards, at the same time holding the soft palate downwards and forwards.

These illustrations were confined solely to the examination of healthy parts; but a great field is opened out, with the aid of the laryngoscope, for the examination of various internal and hidden diseases of the larynx, of which we at present have scarcely any conception. The Professor told me that with its aid he has been enabled to introduce the solid caustic and touch an ulcer within the larynx. If tracheotomy has been performed for laryngeal disease, a reflector can be introduced into the tracheal opening, and a view of the internal disease will be at once afforded from below upwards. Much as the ophthalmoscope has done for hidden and obscure diseases of the eye, it is probable that even more may be expected from the laryngoscope in many terrible, intractable diseases of the larynx. But it appears to me that it is an instrument that cannot be commonly applied, unless by very delicate and steady hands; and it requires a special experience in its use. My own throat was submitted for examination, and the little reflector was delicately and gently applied by M. Czermak in front of the soft palate; I did not feel the slightest uneasiness, although my faucial mucous membrane is irritably sensitive, and I was able to sustain a good, prolonged examination. The Professor declared, however, that I knew how to disport my throat for examination; and he said that he saw the laryngeal structures more distinctly and with greater facility than is his custom. Dr. Thudichum was not so fortunate in applying the reflector to my throat, for it rather tickled the uvula, and I felt disposed to cough. After a little practice on myself with this instrument, I feel persuaded that I shall be enabled to demonstrate its use pretty satisfactorily to others.

There are other peculiarities in connexion with the laryngoscope besides those I have described. It is not necessary, however, that I should do more on the present occasion than to draw attention to the use of this most valuable auxiliary. No one in any way familiar with the delicate structures of the throat should be without it.

Portman-street, Portman-square, Oct. 1860.

ON THE OPERATION FOR THE RELIEF OF PHYMOSIS.

By J. C. Wordsworth, Esq.,
Surgeon to the Ophthalmic Hospital, Moorfields.

Few of the minor operations of surgery are performed in more varied ways than those commonly practised for the cure of phymosis. Some surgeons are content to imitate the Hebrew circumcisors; others simply slit up the prepuce, and, having introduced a few sutures, leave the angular flaps so produced. In infants it probably does not matter very much which course is pursued; provision having been made for the free exposure of the glans penis by a sufficiently large aperture in the prepuce, nature generally adapts the structures nearly to the normal type by a gradual and modified development, so that scarcely any vestige of either the defect or of the operation practised for its relief can be seen in after life. But with men and boys, in whom there is no longer this mode of adaptation, it becomes a matter of more consequence that the operation should leave the structures concerned in the nearest possible condition to that which nature usually produces, as growth and development can no longer compensate the deficiencies of art.

Under these circumstances, a moment's reflection will suffice to indicate the procedure which will best effect the object in view. The aperture being contracted and rendered inextensible, principally by the rigid mucous layer of the prepuce, it may obviously be most easily enlarged, and with least mutilation and violence of the organic relations, by a curved incision corresponding with its free margin. The frænum and its lateral prolongations into the prepuce will thus be left intact, and the size of the aperture increased at the expense of the dorsal portion of the prepuce. Having, then, decided on the mode of enlarging the aperture, what is the best means of effecting it? After seeing a considerable number of these operations performed by others in the various ways detailed by systematic authors, and from some experience of them myself, I have latterly performed the operation on a plan which, so far as I know, differs from any other, and I believe affords facilities and advantages over all.

Let us take a common example, in which the aperture has gradually become so small that it may be compared to a pin-hole. The ordinary silver probe with a point may be introduced by drawing forward the prepuce from the glans penis, and passed as high as the reflection of the prepuce from the penis. This being ascertained, it may be pushed through the prepuce a little nearer to its free margin or at any other part sufficiently distant to allow of the necessary increase of aperture. An ordinary straight needle, armed with a piece of fine silk, should then be passed through the prepuce at short distances, so as to act as sutures. This may be done as follows:—An assistant holds up the probe, and the operator with one hand stretches the prepuce downwards, and with the other transfixes it with the needle in a curved line, reaching from the orifice to the point of puncture, so marking out the portion of the prepuce to be removed. At least a dozen sutures should be passed, and the upper one should be a little higher than the aperture made with the probe. Then with a sharp pair of scissors cut off the piece of prepuce between the probe and the sutures at the distance of two lines from the latter. An oval aperture, having its long axis perpendicular, will have been made. The centres of the sutures are then drawn upwards and divided, so that each silk forms two, and lightly tied. A little wet lint is wrapped round the penis, and the patient laid on his back, with a cradle to support the bedclothes.

This operation differs from the French mode of procedure with the fenestrated forceps principally by substituting a curved line of incision, by which only the dorsal portion of the prepuce is removed, and the frænum left intact; and the scissors allow of a more clean and accurate incision than the bistoury.

ON THE

CONNEXION BETWEEN CHOREA AND ACUTE RHEUMATISM.

By Gilbert W. Child, M.D. Oxon., M.R.C.P.
Physician to the Radcliffe Infirmary, and Consulting Physician to the Warneford Lunatic Asylum.

The following cases of chorea, which have lately fallen under my observation at the Radcliffe Infirmary, Oxford, will, I think, be found interesting, as illustrating the connexion between that disease and acute rheumatism:—

Case 1.—An agricultural laborer, aged twenty-three, admitted July 4th, suffering from a well-marked but not severe attack of chorea. The right side only was affected. This case in itself presented no remarkable feature, except that afforded by the age of the patient, who had had no previous attack. He was treated with sulphate of zinc, in doses gradually increased up to fifteen grains, three times a day; and was discharged, recovered, on the 8th of August. This young man had suffered previously from acute rheumatism.

Case 2.—Also an agricultural laborer, aged seventeen. This case was very similar to the last, was treated with the liquor potassæ arsenitis and moderate purging, and recovered rapidly. This lad's father had suffered several times from acute rheumatism, but the patient himself had never before had either rheumatism or chorea.

Case 3.—A little girl, aged twelve, admitted August 1st, and still in the house. This case presents some peculiar features. On admission, the attack of chorea appeared to be very severe, and the child was much emaciated; the skin hot, dry, and remarkably harsh; the tongue dry, and the lips cracked. There was a feeble pulse, and great thirst. No history of fever was extracted from the mother, but subsequently, when sufficiently recovered to speak, the child told us that some children at home had had "the fever" just before. The child's appetite was good, but she got scarcely any sleep and screamed violently in the night. A day or two after admission, a rash having all the characters of roseola made its appearance. She has improved rapidly under the use of warm baths, diaphoretic doses of antimony, and a generous diet, with port wine and water. This patient has had chorea previously, but not rheumatism; her mother, however, had chorea when herself a child, and also suffered from acute rheumatism about a year before the birth of this child.

Case 4—This is an ordinary, and not very severe case of chorea, the patient also being a little girl, and not having suffered any previous attack of either chorea or rheumatism. In this case again the mother experienced an attack of acute rheumatism about a year before the child's birth.

Case 5.—E. B——, another little girl, of about the same age, was brought to the hospital, on August 29th, suffering from slight chorea, combined with anæmia and general debility. In this case also I found on inquiry that the mother had had acute rheumatism about fifteen years ago.

Observations.—Of the above five cases, which have come to this hospital in the space of scarcely more than two months, Case 2 was under the treatment of Dr. Rolleston, the others under my own. Since the year 1850, when the existence of a connexion between rheumatism and chorea was announced by M. Sée, of Paris, and in England by Dr. Senhouse,[*] much attention has been given to the subject. M. Botrel, in the following year, went so far as to declare that chorea is nothing but "rheumatism of the nervous centres."[†] Botrel's view was not, however, generally accepted; and opinions on the point have varied greatly since that time, so much so, indeed, that one of the latest French writers on the subject (M. Moynier[‡]) declares the connexion to be merely accidental, though he himself, inconsistently enough, tells us that, out of thirty cases which he examined, the connexion in question could be traced in eighteen. Dr. West[§] has never once met with it, nor (he says) has M. Rilliet, at Geneva. It is well known that both diseases are often hereditary; and Dr. Begbie was, I believe, the first to point out the existence of a family connexion between the two—to show, that is, that it frequently happens that where one member of a family is subject to chorea, another is rheumatic. The cases given above seem to me to point to the conclusion that rheumatism and chorea are "hereditarily convertible"—i. e., that rheumatism in the parent may descend as chorea to the child. If this should be supported by more extended inquiries, and more especially if the converse should be found equally true, it would, I think, go far to establish, in part at any rate, M. Botrel's theory, that rheumatism and chorea are not similar only, but essentially identical—i. e., that one and the same blood-poison may manifest itself, according to circumstances, as either chorea or as rheumatism. But whatever may be thought of the theory, the cases seem to me worth recording, if only as showing the connexion between the two diseases to exist in them in larger proportion than in any recorded set of consecutive instances with which I am acquainted.

Oxford, Nov. 1860.

REPORT OF

TWO CASES OF IDIOPATHIC TETANUS TREATED BY INDIAN HEMP.

By William Farrage, L.R.C.P.E.

The following cases of Idiopathic Tetanus treated by Indian Hemp, occurring during my residence in Melbourne, Australia, may be of interest at the present time, when the treatment of the disease in its trumatic form is so fully engaging the attention of the profession.

Case 1.—Sept 21st, 1857.—Mr.——, aged thirty-two, wool-worker on the banks of the Yarra-Yarra, a man of temperate and quiet habits, for two or three days previous to my visiting him, had been suffering from stiffness of the muscles of the neck and slight rigidity of the lower jaw, which was attributed to a common cold. On the above day, before my visit, he had been seized with spasm and great pain, every few minutes, along the whole spine; by the slightest movement, touch, or noise, the muscles of the back were thrown into violent spasmodic contractions, bending the body forcibly backwards. The lower extremities were not affected. There was slight stiffness of the lower jaw, but no trismus; no difficulty in swallowing. Tongue clean; pulse 80, full, and strong; skin moist; no tenderness over the abdomen; no head symptoms; bowels had acted from castor oil. The following pills were ordered: Calomel, eight grains; extract of hyoscyamus, twelve grains. Divide into four pills; two immediately, and the others at night. A purgative enema the following morning, with two drachms of spirits of fœtid ammonia; and a liniment to be rubbed along the spine, composed of tincture of opium, tincture of cantharides, and camphor liniment.

22nd.—Ten A.M. Bowels acted twice, but no abatement of the spasms. The abdominal muscles were now tense and rigid, and the patient complained of great pain. Turpentine epithem to the abdomen followed by hot fomentations. To take the following mixture: Solution of hydrochlorate of morphia, and tincture of hyoscyamus, of each two drachms; spirit of compound sulphuric ether, a drachm and a half: camphor mixture, four ounces; the fourth part every two hours.

23rd—Twelve A.M.: No abatement of the spasms; still increasing. Strength good; pulse 84. Repeat enema, and to take the following pills: Extract of cannibis indicus, six grains; extract of hyoscyamus, and assafœtida, of each half a drachm: divide into twelve pills; one every hour.

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[*] See Canstatt's Jahresvericht, 1850, vol. iv.

[†] Ibid., 1851' vol. iv.

[‡] Ibid., 1858, vol. iii., p. 44.

[§] Diseases of Children, 4th edit., p. 206.

24th.—Ten A.M.: Bowels had not acted; no abatement of spasms. To take tincture of Indian hemp, thirty drops in water every two hours; and repeat the enema.

25th.—Bowels acted; spasms still increasing; pulse 72, and much weaker; skin cold and perspiring; tongue clean. Wine and beef-tea to be taken every two hours, and Indian hemp continued. Counter-irritation to the spine with croton oil and turpentine.—Five P.M.: Much improved; pulse 84, and stronger.

26th.—Nine A.M.: Spasms still continue, but more confined to the centre of the spine; pulse 80, firm and strong; each paroxysm to-day is ushered in with a cry of pain referred to the centre of the back; expression of face bad—"that peculiar expression noticed in tetanus." Continue the Indian hemp, increase to forty minims; and beef-tea and wine. Five P.M.: Much worse. The muscles of the whole system were now more or less involved with spasm, and trismus was now complete. While I was standing by the bed-side, he was seized with a severe fit, the respiratory muscles being affected to such a degree as to prevent him from breathing; the jaw fixed and rigid, the eyes fixed, and the face fearfully distorted; respiration was suspended, the heart ceased to pulsate, and he was apparently suffocated. In a few minutes there was relaxation of the muscles, but no return of the heart's action or respiration: he was to all appearance dead. Something must be done to try and bring about reanimation. I put in operation Marshall Hall's method of treatment. In about five minutes there was a deep inspiration, followed soon after by pulsation of the heart. The treatment was continued for some time, until he was quite restored. There was no return of spasm with the reanimation. Continue the Indian hemp, beef-tea, and wine; and the following draught to be taken immediately: solution of hydrochlorate of morphia, forty-five drops; tincture of hyoscyamus, forty-five drops; camphor mixture, one ounce and a half.—Eight P.M.: Much better, having slept for several hours; slight return of spasms in the back on awaking.

27th.—Ten A.M.: Had spent a good night; slept well; pulse 84, full and strong; expression of face natural; makes no complaint of pain; no return of trismus; no difficulty in swallowing.—Three P.M.: Still improving. Continue the Indian hemp, beef-tea, and wine. As the bowels had not acted, he was ordered to take the following draught immediately—five grains of calomel, and half a grain of hydrochlorate of morphia; also a purgative enema in the morning.

28th.—Ten A.M.: Bowels acted twice; much improved; pulse 76, full and strong; tongue clean; still slight spasmodic twitches in the muscles of the spine about every hour, but no pain.

29th.—Eleven A.M.: Still improving; pulse 84, full and strong; tongue clean; no tenderness on pressure over the abdomen or spine; spasms of back continue, though slight. About seven P.M. I received a message to visit him, as he had been very restless during the afternoon. "His residence being about two miles' distance, and not an urgent message to visit him immediately," I arrived there in the course of an hour, and found him quite dead. In attempting to get out of bed, he was seized with spasm of the entire body, involving the respiratory muscles, and died in less than two minutes. He was conversing with his wife freely about five minutes before this sudden return of spasm, and said that he felt much better and quite free from pain. There was no chance of reanimation, as he had been dead nearly an hour. No post-mortem examination of the body was made. There was no prostration of nervous power to cause death. The most prominent symptoms had subsided—namely, muscular rigidity and spasm. The pulse was good, all expression of suffering gone, and sleep restored. Spasm of the respiratory muscles and heart could be the only cause of this sudden death.

Case 2.—In 1857, I was requested to visit the son of a medical man, aged twelve years. He had been complaining of stiffness of the muscles of the neck and lower jaw for two or three days, attributed to a common cold, arising from being overheated when playing at cricket, and afterwards sitting on the wet grass. When I saw him the spasm had extended to the muscles of the back, abdomen, and extremities, with great pain in the contracted muscles; pulse and respiration quick, with complete trismus. This latter symptom continued for six or seven days, without any relaxation of the muscles of the lower jaw.

The treatment was the same as in the former case: tinctrue of Indian hemp, ten minims every two hours increased to twenty minims; calomel occasionally at night, and enema on the following morning; beef-tea and wine, with counter-irritants to the spine. The spasm and rigidity of the muscles were so great in this case, that when the little fellow was raised up he was as rigid as a block of wood. All his medicine and nourishment were sucked through an opening between the teeth with a small tube. The spasms partially abated after the seventh day, and he quite recovered. The only additional treatment was during the convalescence a little citrate of iron and quinine.

Melbourne House, Hampstead 1860.

ON A

CASE OF OBSTRUCTION OF THE BOWELS FROM ADHESION TO THE UTERUS.

By J. H. Aldridge, M.D., Southampton.

Mrs. S——, aged fifty-seven years, the mother o five children. About six months before her death she had a severe attack of flooding, although her menstrual discharge had ceased years before. She was always of a costive habit, and in the month of February, 1859, symptoms of obstruction of the bowels came on, which became more and more aggravated up to the period of her death on the 10th of April following. For some weeks before her decease she had stercoraceous vomiting, the ejected matters being of a yellowish colour, watery, and having a strongly-fæcal odor. She seemed to die gradually of exhaustion.

Examination two days after death.—(The abdomen only was examined.) On opening the abdominal cavity, the intestines were seen to be smeared with a yellowish-colored, watery, offensive matter, similar to that which she had vomited during life. This fluid must, therefore, have escaped into the peritoneal cavity through some hole in the gut. However, it cannot be said that this rupture of the bowel occurred during life, because the texture of the lower part of the small intestine was found to be so extremely soft and friable that it was rent by the slightest touch. In some parts it was gangrenous. It is, then, more than likely that the tear may have taken place after death, either by the pressure of gas developed in the bowel, or by movements of the body, or while opening the abdomen. The small intestine was seen to to be very much distended, particularly the lower portion, which was of enormous diameter, nearly equal to that of a normal large intestine. The coats of the ileum in nearly its whole length were in a high state of inflammation. Near the lower end, approaching the cæcum, were many dark-colored patches, some as large as two-shilling pieces, others smaller, where the whole thickness of the intestinal wall was perfectly gangrenous. The texture of the gut for several feet above the cæcum was so friablo that on moving one coil upon another it tore at various points. In the upper part of the small intestine was found the same yellowish-colored, watery, fæcal matter that the patient had vomited during life; lower down the contents of the bowel became more consistent; and for several feet from the lower end of the ileum the latter was enormously distended with tenacious yellowish-colored fæces, very much resembling putty. The cæcum and large intestine were nearly empty, only a few knots of hardened fæces being found in the latter. In the lower end of the ileum, therefore, the obstruction was seated. On careful examination, the latter was seen to be dragged down into the cavity of the pelvis, and to be firmly adherent to the back wall of the uterus. When the small intestines and the contents of the pelvis were removed from the body, the state of matters could be clearly seen. About six inches from the ileo-cæcal valve the ileum had become firmly adherent to the posterior wall of the uterus—rather towards the right side—and to the right ovary. The gut at the adherent point made a sharp turn towards the cæcum. Accordingly, everything requiring to pass through this part of the bowel had to travel along its canal bent almost at a right angle. The calibre of the ileum at the attached point seemed smaller than normal, but not much so. It is obvious that this sharp bend in the canal of the gut must have tended very considerably to retard the passage of the fæces through it, and, the latter having been hard and dry, as is usually the case in persons of obstinately costive habit, it can easily be understood how stoppage of the contents at this point occurred. Once commenced, such an obstruction would only become aggravated in the course of time by the gradual accumulation of fæces above it, and by the strong muscular efforts of the bowel to propel the contents onwards, as happened in this case, in which, during life, the violent peristaltic action of the intestines could at times be distinctly seen. It is not unlikely that if the patient had at a sufficiently early period overcome the tendency to constipation by keeping her bowels in a rather relaxed condition, the obstruction might have been averted, or at all events delayed. On removing the uterus from the body and cutting it open, the whole of the organ was seen to be one mass of epithelial cancer (cancroid), thus accounting for the floodings which the patient had some months before death, and also, in all probability, for the adhesion of the ileum to its posterior wall, as above described. The cancroid disease having implicated and eaten into the whole thickness of the uterus, even to the serous covering of the same, peritonitis seems to have been set up at this point, and to have thus occasioned the attachment of the loop of intestine to it. The coats of the ileum for an inch or two above and below the adherent part seemed to be perfectly healthy. The adhesions between the small intestine and the uterus were very firm, and must, therefore, have existed for a considerable time, perhaps for months.

At what period the cancroid disease of the womb began it is of course impossible to say, but that it had already attacked the uterus six months before the fatal termination of the case is evident from the occurrence of severe flooding at that time. If obstruction of the bowel had not supervened, and thus put an end to the patient's existence, it is very probable that ultimately a fistula between the uterus and ileum might have taken place by the extension of the cancroid disease through the adhesions and through the coats of the gut.

Southampton, 1860.

ON THE

PREVENTION OF THE FORMATION OF STONE IN THE BLADDER.

By J. Crichton, Esq., L.R.C.S. Edin.,

Late Senior Surgeon to the Royal Infirmary, Dundee.

It has for long been a source of much regret to me when called upon to see a patient writhing under the most intense sufferings the human frame is capable of enduring, arising from calculous concretions in the bladder, all of which might have been so easily prevented by laying their case before a professional man, conversant with such disorders, at the commencement of the symptoms; and it was with much pleasure I read in The Lancet a very considerate communication from Mr. Henry Thompson, "On the great Importance of Early Diagnosis and Treatment of Stone in the Bladder"—as indicating the attention of the profession is now seriously drawn to the subject.

What has served to bring the subject more vividly to my own mind at present is the case of a young girl, between four and five years of age, brought to me for advice by her mother and aunt, from whom I learned the following particulars:—That the child at its birth looked so very puny and woebegone, that the mother became possessed with the notion that the infant would not live, which notion she still held most determinedly. The child, however, continued to live, if not to thrive, and when twelve months old began to be affected with frequent micturition, accompanied with pain and severe straining; and for some months past both the mother and her husband have been perfectly worn out by her incessant struggling and screaming, preventing them from getting a night's rest. I asked her why she had not applied for assistance sooner. She said she had been frequently importuned to bring the girl to me, but what could be the use of applying remedies to a dying child? Wondering at the woman's folly, I said, "She is *not* dying, and, when relieved of her suffering, will yet live, and perhaps have a family of her own." But as it was necessary to examine the state of the bladder before advising what further was to be done, the mother seeing me take an instrument out of my case, cried out that she would not witness anything done to her child; which made the girl scream out also in terror. Finding matters thus, I desired the aunt, who appeared to be a sensible woman, to assist them home (a distance of about two miles in the country) and return with the girl the next or first convenient day, without allowing the mother to come with her; and also to endeavor, by every method in her power to disabuse her sister's mind of the absurd notion that the child was dying.

When the aunt returned with the girl, I caused her to be held firmly in the position which I had placed her, although she struggled and screamed with terror and affright most furiously; and having introduced a narrow-bladed forceps into the bladder, instantly grasped the stone within the blades. The little patient now becoming quiet and resigned, not experiencing the pain and suffering she had at first anticipated, I proceeded to the extraction; but finding that I could not by any possibility get the calculus to enter the urinary passage, I slackened my hold, and succeeded in grasping it in a more favorable position; the forceps was then withdrawn in a very gentle, easy manner, with the crushed stone within the cavity of its blades. I then desired the cook to give them some refreshments, and allow them to sit by the fireside till I should see them again. About two hours afterwards they were sent to my room, and I learned with delight that the girl had a few minutes previously passed her urine in a stream, without the smallest pain or interruption; but as the day was now far advanced, I desired the aunt to get a lodging in town for the night, in order that, if any fragment of the stone remained in the bladder, she might be at hand to get assistance. Next day she called on me with the girl, and informed me that she had slept soundly till a late period in the morning, having only awoke twice to empty her bladder, which she did in a full steam without any pain or straining.

Out of a number of cases of a similar nature, I shall only mention one which took place towards the end of the last century. In April, 1799, I was sent for to see a person of the name of D——, well-known throughout the place for the eccentricity of his habits and the continued shaking of his head, who informed me that he had been been tortured for the last thirty years with what was called stone in the bladder; that he had used vast quantities of medicines and other stuffs—amongst others, raw onions, of which he had swallowed more than a cart-load—without the smallest appearance of a cure. He was then strongly importuned to go to London or Edinburgh, and get some of the great doctors there to remove the stone by an operation; but he always said; "No, no. I have known several of my acquaintance to go to these doctors, but never one of them returned alive." Of late, however, finding his health and strength fast failing, his sufferings increasing, and death staring him in the face (he was seventy years of age); and hearing every day of the numerous patients suffering from the same cause, both in this place and from afar, who had placed themselves under my charge, and who, after removal of the stone by operation, had all made rapid recoveries, not one having died,—he had now made up his mind to put himself under my charge also, and, if I did not consider it too late, to undergo an operation for the removal of the stone.

I called upon him next day along with two other medical gentlemen, who were all perfectly satisfied of the existence of a stone in his bladder, and that, although his strength and health had been rapidly declining of late, yet the removal of the stone by operation was the only chance left for recovery and relief from torture.

A few days afterwards I operated upon him by the lateral method, and removed a large rough stone, weighing five ounces. He made a good recovery, and lived twelve years afterwards, quite free from his sufferings.

From these two cases it will be seen how many years of misery and torture might have been saved to the old man and the young girl if proper attention had been bestowed at the commencement of the symptoms.

I shall now narrate two other cases, showing how easily the sufferers may be saved from long-protracted agony, merely by resorting to the proper steps for the removal of the cause as soon as the symptoms are observed.

About eighteen months ago I was called upon by a fine-looking lad, about eighteen years of age, who informed me that about three months previously he had become affected with frequent desire to void his urine, accompanied with pain and straining, and that for several days past the pain and straining had been so frequent and severe as would put a stop to his occupation, unless he could be relieved. I sounded him, and felt a calculus very distinctly. I afterwards introduced a large catheter into the bladder, which was accomplished with ease, and then told him there could be no doubt of the presence of a stone in his bladder, which must be removed before he could obtain relief from his sufferings; but as the calculus was probably of small size, in consequence of the shortness of the period since he first became affected, and the urethra free of any stricture and very dilatable, I hoped that by calling on me every morning, and getting a large catheter introduced into the bladder, and taking the diuretic mixture, he might soon pass the stone by the natural way, without having recourse to crushing or the knife.

Several days passed, and one morning he did not call as usual. I met him, however, in the street, and was informed by him that the previous night about bedtime he was attacked by one of his fits of straining to void his urine; but, instead of coming off in driblets as usual, not a drop came, and he left his house with the intention of coming to me for relief. Before he got half way the straining became so violent that he was forced to support himself at a house-wall, and very soon something passed from him like a shot, followed by a gush of urine, upon which he immediately felt relieved, and returned home to his bed, and slept till a late period, only awakening twice to empty his bladder, which he did in a full stream without pain or straining.

The other case was that of a boy, five years of age, brought to me by his mother four or five months ago, who informed me that he had always been in a delicate state of health; but that about five or six months previously he had become affected with symptoms of calculus vesicæ, which had increased to such a degree of late as to prevent him from going to school. Upon sounding, a calculus was distinctly felt, and from the dulness of the stroke, it appeared to be of a softish nature, which would render it easy to be crushed if necessary; but as it was probably of small size, in consequence of the short period of its existence, and might pass off naturally by increasing the force of the flow of urine, I ordered a medicine of that tendency, and desired her to call again and let me know the result. Upon her calling a few days afterwards she informed me that from the time the child was sounded he had passed his urine freely, without pain or straining, except occasionally, and upon these occasions she observed small fragments of stone or sand at the bottom of the vessel, showing that the calculus had been shivered in pieces by the stroke of the sound—a circumstance I have upon more than one occasion observed to take place. A week or two afterwards I learned that the boy was attending school again, quite free from suffering.

Before concluding, I cannot forbear to remark, although not altogether relevant to the subject on hand, that in an operation such as lithotomy, requiring the use of chloroform to render the patient quiet and maintain a steady position, it would always be satisfactory to witness the effect of chloroform upon him a day or two beforehand, as it sometimes varies in its effect on different constitutions; the neglect of a due regard to which was the cause of much annoyance to me whilst operating for stone about a year ago, upon a middle-aged person from the country, who, before I had well completed the first incision, became quite furious, every muscle of his body seeming to be in violent convulsive action, accompanied by several spasmodic ejections from his bowels, bespattering my face and clothes in no very kindly manner whilst I was sitting before him with the knife in my right hand, and the forefinger of my left pressing upon the fore part of the prostate, stedfastly observant of all the commotion taking place within, (and a fine, well-disciplined forefinger it is, having always served me most faithfully as pioneer in hundreds of bloody engagements.) This state of matters continued for nearly twenty minutes, when my forefinger, the pioneer, observing a lull in the commotions inside, telegraphed me I might now commence action, and I immediately finished the operation by removing the stone. The patient made a most rapid and perfect recovery, and in a few weeks was busily employed on his farm in good health, and perfectly relieved from his sufferings. So much for chloroform.

I shall now conclude by observing, that all parents are now well instructed in the knowledge that simply by vaccinating their children they thereby secure them against that most loathsome and disfiguring disorder—the small-pox. And why should not they be equally well instructed in the knowledge that if ever they themselves, or any of their children, should become affected with the common symptoms of stone in the bladder, they should apply without delay to a professional man conversant with the disorder, who would immediately remove the cause, and thus save them from long-continued misery and torture?

Dundee, 1860.

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ON SANGUINEOUS MENINGEAL EFFUSION.

By M. Broke Gallwey, Esq.,

Surgeon-Major, Royal Regiment of Artillery.

Under the above heading, Dr. Wilks has lately produced, in the "Guy's Hospital Reports," an able and practical paper, that has an intimate relation to much that we meet with in the domain of cerebral pathology. I avail myself of his introduction of this subject to the profession to bring the following case under the notice of your readers:—

Gunner J. M——, Royal Artillery, aged twenty-six, was brought into the hospital here at nine A.M. on the morning of the 18th of May, in a state of partial insensibility, having been picked up the preceding night by a picket in a public-house, on the ground-floor of which he was reported by the landlord of the same to have been lying insensible from P.M. of that day. Very naturally considered by the sergeant of the guard, into whose hands he was consigned by the picket, to be only "dead drunk," he was deposited on the floor of the lock-up room until the morning after, together with the other worthies consigned to his care, in the different stages of oblivion to which the weakness of their heads or strength of their finances had brought them. I must plead guilty to having at once endorsed this view of the man's complaint, especially as he exhaled a strong effluvium of rum, and discharged a quantity of this fluid from his stomach immediately after admission into the hospital. He was capable of being roused, and even of responding to questions when loudly proposed to him, but immediately after would relapse into unconsciousness. His pupils at this time were of natural size, though sluggish; pulse oppressed, and somewhat slow; skin nowise remarkable. Having due regard to his immediate antecedents, the patient was put to bed, and merely ordered to be watched. Nothing remarkable transpired during the first twenty-four hours after admission; but at the visiting hour of the day after, some ptosis of the right upper eyelid attracted attention, with eversion of the corresponding eyeball; and now also the grasp of the right hand was found to be materially weakened, together with the patient's control over this entire limb. The leg of the same side was unaffected; the facial muscles were not implicated; and his speech, which had now returned with returning consciousness, was distinct and uninvolved. He was now able to recollect and relate the occurrences antecedent to his attack. He remembered to have been drinking in the public-house, but at that point his memory deserted him. He admitted that his habits had been intemperate; and I ascertained a little later, from one of his comrades who had known him well and for a long time, that he was inveterately addicted to the bottle. I ought to have stated that the patient's head was carefully examined for external evidence of injury, but without leading to any results in this direction; while, throughout his illness, he made no complaint of pain in any part of the same.

By the third day, the paralytic phenomena had increased slightly, but there was no corresponding implication of the intellectual faculties, nor was there any irritative development in the muscles of the affected arm. The urine was examined for albumen, and traces of that substance were found, yet insignificant in amount. The pupil of the right eye had now become much dilated, and was insensible to light; the ptosis and eversion continued. Opposite pupil lively, and of natural size.

This patient died on the sixth day after admission, his case having undergone very little alteration from the state of things recorded in the foregoing details. To the last he continued free from coma, screamed out at times towards the close of the scene, and died at length exhausted.

The autopsy of Dr. Wilks' *fifth* case recounts almost so exactly what disclosed itself in that of J. M——, that this physician's description will fit in here almost without the transposition of a sentence, or the alteration indeed of a line:—

"The head presented no external signs of injury, and the bones were not fractured. On removing the calvaria, the dura mater was of a dark color on the *right* side, and was flaccid. On lifting this up, its inner surface, as well as that of brain, was seen covered with blood, being contained, in fact, in the cavity of the arachnoid. The blood was fluid, or in form of loose coagulum. The whole of the right half of the brain was surrounded by the effused blood, and which had evidently compressed it; this was seen by the septum of the ventricles being pushed over to the left side. The blood had passed down to the base," and was found also in some quantity there. "The left hemisphere was unaffected; there were no inflammatory products to be seen by the naked eye. The brain itself was carefully examined, in order to discover any breach of surface as a source of the hæmorrhage, but *none* could be found. No laceration could be found in the sinuses or meningeal vessels, from which the blood could have flowed."

I may add that the brain did not disclose any, the least, appearance of bruising.

The effused blood bore the appearance of being quite recent, having undergone no change of color or chemical alteration indicative of having been long separated from its natural channels. The left ventricle was the seat of a vast effusion of limpid serum, into which no blood had found access. A much smaller quantity occupied the right; and the third and fourth ventricles also were distended with the same. The substance of the brain was healthy throughout, the left corpus striatum and optic thalamus being no exception to this condition. The vessels of the brain were sounded and, judged by the naked eye, free from any degenerative tendency. There was nothing about the origin or course of the third nerve to explain the ptosis of the right upper lid; nor was there any sufficient cause apparent for the paralysis of the right iris more than of the left, which latter had been lively throughout under its natural stimulus. The walls of the heart were preternaturally thin; valves all healthy. External capsule of liver extensively figured with deposits of fibroid degeneration, laid down, I may almost say, in sheets—that peculiar appearance so often met with, and so generally laid at the door of chronic inflammation, and which Dr. Wilks himself, I believe, conceives to have its origin in a change *sui generis*, probably the offspring of syphilis, or of alcohol, or of both. Tissue of kidneys healthy, but the secreting structures of both, more particularly of the right, in a state of intense and universal venous congestion, to which the term of venous apoplexy might not be very inapplicable. Both renal veins much dilated.

Remarks.—The leading points of interest about the foregoing case I take to be the following:—

1. That a man is not always to be taken for dead drunk, even though picked up insensible on the floor of a public-house, with the odor of spirit about him at the time.

2. That a large effusion of blood may be discovered on the surface of the brain, and yet elude our closest inquiries into its source.*

3. That such large effusion of blood is not necessarily productive of coma, this symptom, from first to last, having been absent in the present case.

Further, it is observable, that although the effusion of blood was upon the right hemisphere, the paralytic phenomena were *not upon the left.* I take this to point to the *recent* origin of the effusion; for, although not existing in connexion with the centres of motion, its amount was so great as to have produced a considerable indentation of the hemisphere towards the ventricle, the long persistence of which. had such been the case, I doubt not, would have influenced the functions of the corpus striatum and optic thalamus. The excessive effusion into the left ventricle, I take to have been the cause of the paralytic phenomena. Blood-poisoning from renal causes plainly, will not explain the *origo mali*, or the symptoms during life, neither convulsions nor coma having been present; nor will degenerated cerebral vessels.

On these several accounts, I think the present case affords a striking illustration of the opening remarks in Dr. Wilks' paper, already quoted:—"Of all the difficult cases admitted into hospitals, those are the most perplexing where the patients are brought in in an insensible condition, and unable to give any account of themselves. A man, for example, may be picked up in the street, or carried from a neighboring public-house, or place of low resort, and the surgeon has to choose between injury, poison, or disease as a cause of his insensibility; and then again, to elect between the probable forms of these. In such cases, the post-mortem examination will generally enable us to determine the nature of the case for the purposes of justice. Occasionally, however, even this is difficult or impossible, and the inspection after death will throw only a partial light upon it."

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* Dr. Wilks has suggested to me the strong probability, in *these cases*, of the ruptured vein or veins leading into the sinuses being cut across during the operation of slitting up the dura mater.

Woolwich, September, 1860.

A Mirror
OF THE PRACTICE OF
MEDICINE AND SURGERY
IN THE
HOSPITALS OF LONDON.

Nulla est alia pro certo noscendi via, nisi quam plurimas et morborum et dissectionum historias, tam aliorum proprias, collectas habere et inter se comparare.—MORGAGNI. *De Sed. et Caus. Morb.*, lib. 14. Procemium.

ST. GEORGE'S HOSPITAL.

EMPYEMA AND PULMONARY ABSCESS CONSEQUENT UPON ACUTE PLEURO-PNEUMONIA; FATAL RESULT ON SIXTEENTH DAY; AUTOPSY.

(Under the care of Dr. BENCE JONES.)

THE following case is one in which an acute attack of pleuro-pneumonia was quickly followed by effusion of serum, which as speedily became converted into an empyema. The prominent feature throughout was urgent dyspnœa, which is explained by the amount of sero purulent fluid present in the chest, together with the condition of the lower part of the lung, which was in the third stage of pneumonia producing disorganization of its structure and a large abscess. The attack, from first to last, reckoning from the time the acute symptoms commenced, occupied about sixteen days, a period beyond the average (ten days) for all the stages of phenomena to run their course; yet it cannot be called a protracted case, for in Andral's table only 15 out of 112 cases of pneumonia continued longer than a fortnight. This case differs from ordinary examples of pneumonia in the fact that the pleurisy accompanying it was followed by much effusion; but this might be explained away by some pathologists, inasmuch as the pneumonia was confined to a portion only of the lung and did not involve a great extent of tissue.

John F——, aged forty-seven, a laborer, formerly a soldier, of temperate habits. Excepting a slight cough, which he had had for seven or eight weeks, this man enjoyed good health until five days before admission, when he was attacked with very acute pain in the right breast, accompanied with diarrhœa and vomiting. Two days later shivering came on, and on the next much difficulty of breathing. When admitted on 16th May, 1860, he lay supine, with heavy inspirations, 42 in the minute; the face was flushed; the skin hot and dry; the tongue thickly coated; pulse full and strong, 114. On examining the chest, there was found to be considerable dulness, with great want of vesicular breathing, tubular inspiration, bronchophony, and a few coarse, moist râles. No true pneumonic crackling could be found, nor was there any ægophony. Strong beef-tea was ordered. He was cupped to eight ounces from the right side; three grains of calomel and half a grain of opium were given every six hours, and he also had a saline draught, containing ten minims of antimonial wine.

May 17th.—The dyspnœa was much less distressing; respirations 36. The sputa formed a uniform brown, gelatinous mass. The tongue was still thickly coated; the pulse full, thrilling, and soft, 104. Twelve leeches were now applied to the chest, and next day a blister. He went on without much change until the 22nd, when the gums were swollen and the dyspnœa worse. The pill was continued three times a day, and gin given.

23rd.—He was breathing harder, in a half-upright posture; the pulse very powerless, full, and had an aneurismal thrill, and he suffered from diarrhœa. The latter symptom was checked by an opiate injection; the blister was repeated, and the stimulants continued.

24th.—Respirations now 42; the cough appeared less frequent, and the expectoration had changed in character. It was no longer tenacious, but watery and lumpy; its hue had changed from deep-brown to fawn color. There was pain in the right side; the tongue was dryish, and brown in part; the face still of natural hue.

From this time (May 26th) he gradually sank, in spite of vinous and ammoniacal stimulants. He became delirious and restless. At last he got cold and clammy, and so died.

Post-Mortem examination thirty-three hours after death.—Body well nourished. There was a moderate amount of serum in the left pleura. The left lung was slightly spumous, but otherwise healthy; the right lung was adherent to the chest walls in the second intercostal space, but this adhesion only extended to the anterior half, so that the upper and lower parts of the cavity communicated freely behind it; all the unadherent portion was occupied by an extensive collection of pus, mixed with serum, and the surface of the lung was smeared thickly with shaggy lymph. The upper part of the lung was healthy; its lower part was in a state of grey hepatization, and had given way in one place, forming an extensive abscess, with very foul pus, which welled out on an incision being made. The lung tissue was also completely disorganized. The heart was large and weak. The aorta was very atheromatous; the aortic valves were free from any appearance of recent disease, but their free margin near the fræna of two of the flaps was bony, combed with small holes, the largest of which would have almost admitted a split pea. Liver healthy. Spleen contained a large fibrinous block. Kidneys large; the left weighed nine ounces; the right, eight ounces: surface of latter presented a deep, depressed cicatrix.

EMPYEMA; MALIGNANT DISEASE OF THE MEDIASTINUM INVOLVING THE RIGHT LUNG AND EXTENDING DOWNWARDS IN FRONT OF THE SPINE; THORACENTESIS; FATAL RESULT.

(Under the care of Dr. FULLER.)

The contrast between the foregoing case and the present is remarkably great, for in the latter there was bulging of the chest, with visible prominence of the intercostal spaces, which were absent in Dr. Bence Jones's patient. The heart was displaced further towards the left side from the supposed effusion, and yet the respiration was not embarrassed. Thoracentesis did not afford the amount of relief that was anticipated. After death, about a pint only of pus was found in the pleura; but this by no means represented the quantity that had been present, for most of it had exuded from the wound made in tapping the chest. The lung disease was complicated with medullary cancer, springing from the posterior mediastinum; yet no indication of its presence was made out during life. As the affected side of the chest, up to the collar-bone, was profoundly dull on admission, and was found disorganized after death and riddled with abscesses, it is probable that pneumonia had been present, and had ended in the third stage of purulent infiltration. The affected lung, if we except its base, was not involved in the cancerous disease, which perhaps explains the absence of some of the signs usually met with when the latter has invaded the lung tissue,—such, for example, as enlargement and tortuosity of the thoracic veins.

For the notes of these two cases we are indebted to Dr. W. H. Dickinson, medical registrar to the hospital.

William D——, aged thirty-four, a warehouseman, admitted June 27th. He was quite well and vigorous up to the end of last year. In January he had a violent cold, with cough; this continued, without much interference with his general health, until two months before admission, when his breath became short. This was followed by much loss of flesh, and inability to lie on the left side. He never had any pain in the side, or stitch, and never spat blood. When admitted, the right side of the chest was profoundly dull up to the collar-bone; it visibly bulged and the intercostal spaces were slightly prominent, contrasting with their condition on the opposite side, where the leanness of the patient showed deep furrows between the ribs. The heart pulsated very visibly about two inches below the left nipple and just outside it. The cardiac sounds were distinctly audible all over the right side; they were as loud at the right nipple as they usually are in the precordial region, while at the left the sounds were exaggerated. Respiration, when tranquil, could be heard as low as the angle of the right scapula; while, when deeply drawn, it could be faintly distinguished down to the bottom of the lung. The man was much emaciated, and the features were sharp, but the complexion was not peculiar. He usually lay on his back, inclined towards the right side. The breathing was not much embarrassed, 22 per minute; pulse 120. The tongue was furred, but otherwise natural. Urine lithatic, but not albuminous. He had ordinary diet and porter. Paracentesis was at once ordered, but delayed by the surgical officials; and a tonic medicine was prescribed. From the 4th of July he grew worse day by day, and complained of depression and sinking. He often lay half back in bed, resting on his two elbows. He could not sleep. The pulse was now full and jerking, but very feeble, and he coughed up much matter, like dark mucus. On the 5th, six ounces of wine were prescribed. A puncture was made on the 6th, and about three ounces of thick sanious pus withdrawn by means of cupping-glasses. No sensible relief was produced. He became weak and faint, and the features were sunken. Another attempt was made on the 9th July to relieve him by means of a small puncture; no evacuation took place at the time, but about half a pint of pus escaped during the night. He became faint as the discharge went on; it continued to dribble all day, and at night he became completely swamped. He complained of nausea and faintness, and, although stimulants were freely given, he sank, apparently by asthenia, on the following morning.

Autopsy, thirty-five hours after death.—Body somewhat emaciated; abdomen tympanitic. An empty sac of an inguinal hernia was found on the left side. Thorax: There was a small opening far back, on the right side of the thorax, through which, with some trouble, a probe was passed into the pleural cavity; pus was exuding from this wound. The posterior mediastinum contained a large malignant tumour, of the hard, encephaloid variety; it filled all the space between the great vessels and the lung, and had attacked the latter. The whole tissue of the lung was perfectly disorganized, and presented a texture riddled with abscesses. This texture seemed to consist principally of the remains of bronchial tubes and vessels. There were no traces of malignant disease in it. The whole lung seemed perfectly useless as a breathing organ. The upper three-fourths of the right pleura seemed tolerably healthy in structure. It was distended by a very large quantity (more than a pint) of creamy pus. There were two openings into this cavity, towards its lower part. One, which seemed to have been made with the knife or trocar, was situated close to the upper border of the fifth rib. The other, larger and more irregular, was situated at the next lower intercostal space. They both communicated, though indirectly, with the external wound. The lower fourth of the pleura was adherent and implicated, with the base of the lung and diaphragm, in a mass of malignant disease. The left pleura was healthy (with the exception of a few adhesions), as were the corresponding lung and the heart. In the arch of the aorta were a few loose glands infiltrated with malignant disease. The muscles around the wound were thickened, and two or three small abscesses existed there.—Abdomen: A great part of the diaphragm was so infiltrated by the malignant disease that none of its natural tissue could be distinguished. The malignant mass reached down the spine, lying in front of the lumbar vertebræ, nearly as low as the sacro-vertebral angle. It was lobulated on its surface, and had much the appearance of a mass of diseased glands. The aorta and vena cava passed behind it, but none of the large vessels seemed compressed. The liver was large and soft; its anterior edge contained a single tubercle of malignant disease, about as large as a hazel-nut. The spleen was large but healthy. The kidneys were large, and coarse in texture.

KING'S COLLEGE HOSPITAL.

CHRONIC EMPYEMA, WITH A FISTULOUS OPENING INTO THE CHEST; ALBUMINURIA; DEATH FROM RAPID ŒDEMA OF THE LUNG; AUTOPSY.

(Under the care of the late Dr. TODD.)

THE subjoined two cases were both primarily attacks of acute pleurisy of the right side, followed by effusion and intercostal bulging. In the first (for the brief notes of which we are indebted to Dr. Edmund Symes Thompson, when house-physician to the hospital), absorption of the fluid went on, leaving a small, circumscribed empyema, pointing externally. This was opened, and continued to discharge matter for many months. The disease now became complicated with renal dropsy and albuminuria, which mainly influenced the final result. In the second case, thoracentesis was performed four times, with an exit of serum on the first two occasions, and afterwards of pus. The pleura was washed out regularly.

with considerable relief, but, as we have now witnessed several times, it proved but temporary.

John B——, a healthy London tradesman, aged twenty-seven, had an acute attack of pleurisy on the right side in December, 1856, followed by much effusion, with bulging of the side. During the three following months, the fluid underwent gradual absorption, except that there was dulness on percussion below the axilla over a space three or four inches in diameter. Subsequently, a fluctuating prominence formed in this situation, into which an incision was made, in the fourth intercostal space, when about an ounce of matter escaped. After a few days the patient left the hospital, the wound still discharging a small quantity of pus.

He was readmitted into King's College Hospital in April, 1859, under the care of Dr. Todd. Several ounces of purulent matter were discharged daily from the aperture in the side. There were considerable ascites and œdema of the legs. (Seven months before his second admission he had an attack of acute renal dropsy.)

The opening in the chest, being small, was dilated by the introduction of sponge tents. The quantity of discharge diminished under this treatment up to a certain point, the dull space proportionately decreasing. He left the hospital, much improved in health; but was again admitted in the following November, with general dropsy, and scanty and highly albuminous urine. About eight ounces of pus were discharged in twenty-four hours from the thoracic opening. The patient was carried off, a few days after admission, by the rapid supervention of œdema of the lungs.

At the autopsy, the right lung was found to be adherent to the pleura costalis, except in the interval between the second and fifth ribs, where the two pleural layers were separated by several ounces (perhaps fifteen) of purulent fluid, contained in a sac formed externally by the partly bared ribs and intercostal muscles and internally by the thickened pleura. Liver large; kidney large and fatty.

EMPYEMA AND HYDROTHORAX; THORACENTESIS FOUR TIMES; DEATH.

(Under the care of Dr. Budd.)

The brief details of this case were kindly furnished by Mr. Huxley, late clinical clerk to Dr. Budd.

James W——, aged forty-eight, was admitted in the early part of 1859, with pleurisy and effusion into the right side of the chest, which produced distension of the thoracic walls, and bulging of the intercostal spaces. There was considerable dyspnœa. He was tapped twice, and serous fluid was evacuated. A third operation gave exit to sero-purulent fluid. It was necessary to perform thoracentesis a fourth time about the middle of November, 1859, when a quantity of pure and very fœtid pus was drawn off. A drainage-tube was introduced, and worn for a week; but as it was found not to act very well, a silver canula was inserted in another situation; it was kept corked, and through it the chest was syringed out with warm water every morning. Afterwards weak creosote water and a solution of bichromate of potass were used instead, which had the effect of diminishing not only the quantity but the fœtor of the discharge. The capacity of the chest also diminished. He now much improved in his general health, and there was a prospect of recovery, when he became very low, and died on the 20th April, 1860.

Post-mortem examination.—Body much emaciated. The left pleura was slightly adherent to the walls of the chest about the fourth and fifth ribs. On the right side, the costal pleura as far back as the juncture of the cartilage and bone was very much thickened. An incision through it opened into a very large cavity formed by the pleural sac, and extending the whole length of the chest from its apex to the diaphragm, and containing a large amount of purulent matter. The right lung was wholly pushed backwards towards the vertebral column, with the exception of a small bridge of pulmonary tissue that arched above the external aperture between the fifth and sixth ribs, and was firmly adherent to the parietes of the chest. The pleura-pulmonalis was densely thick. No tubercles were found in this lung. The upper lobe of the left lung contained numerous isolated, small deposits of tubercle in their first stage. Liver large and fatty. Heart healthy.

FOREIGN BODY IN THE VAGINA, COVERED WITH CALCULOUS DEPOSITS, AND PRODUCING A VESICO-VAGINAL FISTULA; REMOVED.

(Under the care of Mr. Partridge.)

The notes of the following case were furnished by Mr. W. H. Wickham, house-surgeon to the hospital. The details speak for themselves:—

J. O——, aged twenty-four, a servant, unmarried, was admitted September 10th, with a foreign body in the vagina. From the history of the case it appears that some months ago an offensive smell was observed about her person, and a discharge of blood and matter was found on her linen. On being questioned about this, she denied that anything was the matter with her. At last, however, she became so personally offensive, that an examination was insisted upon, which was made by the family medical attendant, who detected the edge of some metallic foreign body amidst a quantity of calcareous matter. She was then sent to the hospital.

Sept. 10th.—Chloroform being administered, the patient was placed in the lithotomy position, and an examination made by Mr. Partridge. The vagina was found to be full of calcareous matter, filling the interior and encrusting the exterior of a tin mould, the rounded extremity of which was directed towards the uterus, and the sharp base towards the orifice of the vagina. The whole lay within the sphincter, and was removed with difficulty, in consequence of its size and the quantity of calcareous matter attached to it. Its extraction was effected, however, by first diminishing its size, by removing as much as possible of the outer encrustation, and bending in one side of the mould; then, by means of a strong pair of bone forceps, and retraction to dilate the vagina, the substance was removed. A quantity of calcareous matter was afterwards scooped and washed out from the vagina; and, on further examination, an orifice, between two and three inches in extent, was found on the left side of the upper wall of the passage. This orifice was observed to communicate directly with the bladder, from which, by means of a lithotomy scoop and forceps, several small calculi, about the size of hazel-nuts, were removed. Subsequently the bladder was washed out, as well as the vagina, which treatment has been continued daily. The urine, which escapes from the bladder involuntarily, is passed through this aperture, which remains to be closed. In other respects the patient is doing very well.

The mould, which the patient now confesses has been there about a year, is two inches and a half in diameter, and rather more than three inches deep.

ST. MARY'S HOSPITAL.

STONE IN THE BLADDER; LITHOTOMY; INFLAMMATION AT THE NECK OF THE BLADDER; COMPLETE RECOVERY.

(Under the care of Mr. URE.)

P. M——, a male child, aged three years and a half, admitted into the above hospital, with stone in the bladder, in March, 1859. Some months previously Mr. Ure removed, by incision of the urethra, a small calculus, which was lodged in the canal, just anterior to the scrotum. The wound healed in the course of a few days. On the 9th of March, Mr. Ure performed the usual lateral operation, and withdrew a calculus of the size of a small hazel-nut. Two days after the operation the patient was attacked with symptoms denoting inflammation at the neck of the bladder—namely, pain at the point of the penis, tenderness of the hypogastrium, frequent pulse, flush on cheek, general restlessness, urgent thirst, and disgust at food, for which three leeches were twice applied, and he had two grains of mercury-with-chalk, and one grain of Dover's powder, together with poultices to the abdomen. He slept soundly for three hours after the application of the leeches; his bowels had been slightly moved; the countenance was improved; the thirst was abated; the skin cool; there was no inclination for food; the wound looked healthy. There was pain on pressure on the right side of the abdomen, but less distension than previously. Three more leeches were applied, followed by poultices, and he was directed to have four grains of compound scammony powder, with one grain of calomel; diet, beef-tea and milk.

March 13th, 1859.—He passed a good night; bowels have acted four times since he swallowed the powder. He refuses all food but milk. The abdominal distension had subsided. There was free discharge by the wound, which looked healthy. Continue the poultices to the abdomen.

14th.—He passed a good night, and has taken fully two pints of milk in the course of the day; the thirst had abated; the wound looked healthy; the countenance, however, was sallow, and he complained of pain when pressure was made on the hypogastrium. He was ordered a warm bath, and three leeches afterwards to the abdomen. At nine o'clock P.M., he was tranquil, the pulse 90, and the skin cool.

15th.—Passed another good night, and evinced general improvement. He continued to partake freely of milk, and ate one or two morsels of meat with evident relish.

17th.—He was laughing this morning. Skin cool; tongue clean; wound half closed, and cleansed of a greyish exudation on the surface. Some urine passed along the urethra. The warm bath daily was the only treatment now employed. To have a mutton chop for dinner.

18th.—He ate some of the chop, but looked sickly; had been fretful all the morning, and complained of pain, referred to the point of the penis. The pulse was quick, and there was restlessness. Ordered a saline mixture.

19th.—Was rather restless in the night; complained only when urine passed by the urethra; bowels moved twice; tongue moist; there was less thirst; skin cool; wound clean. The countenance had still a sickly look. Ordered two grains of mercury-with-chalk at night.

21st.—Notable improvement was manifest in all respects; asked, for the first time, for dinner.

22nd.—The nurse perceived some pus flowing from the wound. He looked sickly, and complained of pain at the penis. Had a warm bath twice daily. The previous afternoon he had a dose of grey powder with rhubarb, and three leeches to the abdomen.

23rd.—He passed a good night; there was still some pus discharged with the urine; was more lively and took bread-and-butter with milk.

24th.—Still complained of pain, but had a good appetite; the skin was cool, and the amount of pus was much diminished. To have an injection of five minims of tincture of opium in about half an ounce of thin starch.

25th.—There was general improvement, and he passed a good night.

28th.—Convalescent; the principal part of the urine still passed by the wound, which had notably contracted in size.

April 12th.—The wound was healed to a mere point, but there was still a trace of pus in the urine. He ate heartily, and had gained flesh.

20th.—The wound was healed; for some days the urine had been voided naturally; the general health was excellent.

24th.—He was taken home, completely recovered.

KING'S COLLEGE HOSPITAL.

LOOSE CARTILAGE IN THE KNEE-JOINT, PRODUCING REPEATED ATTACKS OF SYNOVITIS; DIRECT REMOVAL; RECOVERY WITH A STIFF JOINT.

(Under the care of Mr. FERGUSSON.)

THE very few cases of loose cartilage which present themselves at our hospitals would almost lead to the belief that it is a very rare affection. This we would venture to remark is by no means the case; for although the examples are far from numerous, yet patients will not apply for relief unless the loose body causes much pain and inconvenience.

There is some difference of opinion amongst surgeons as to the means to be adopted for getting rid of these bodies. Some prefer to remove them at once, whilst others leave them in the areolar tissues. Experience goes to prove that success more usually attends the latter proceeding, and that sometimes most serious consequences have ensued from the former, involving loss of both life and limb. We recollect seeing an hospital patient submitted to Syme's operation for the passage of a loose body from the knee to the subcutaneous areolar tissue, but the surgeon could not resist the desire of removing it altogether. The consequence was that the most violent inflammation set in, in a healthy constitution and robust frame. It went on to suppuration, and the leg had to be removed at the thigh, the patient barely escaping with his life. This is by no means a solitary instance of the bad results of direct removal of the loose cartilage, and hence that proceeding has invested almost every case with uncertainty and fear as to the result of any operative measures for relief. Mr. Syme's and Dr. Goyrand's operation, together with various modifications of it, taking the precaution to leave the loose body beneath the skin, at any rate for a time, we have now seen performed on several occasions, without any bad consequences whatever. Some surgeons endeavor to obtain adhesion at the spot recommended for its detrusion by exciting some inflammation by puncturing the synovial membrane subcutaneously with a lithotome. We have heard Mr. Hilton remark that he has treated one case by subcutaneous section with success, and two without any operation, the bodies being kept stationary, and ultimately, he believed, absorbed.

We had the opportunity of seeing another case treated during the past summer at King's College Hospital, in which the loose cartilage had been present probably for ten years, but most certainly for three. Mr. Fergusson preferred cutting it out direct from the joint by means of a valvular incision. In some observations made on the occasion, he stated that he had cut a loose body directly from the knee-joint several times, and the result had always been successful. He adverted to Mr. Syme's subcutaneous operation, but preferred his own method. Fortunately the present case has turned out tolerably well, but the patient ran very great risks from the extreme severity of the inflammation which followed, synovial fluid and pus flowing from the joint for some days; recovery has ensued with a stiff limb. We have seen recovery take place under precisely similar circumstances, but with firm anchylosis of the joint after a long and tedious illness.

We are indebted to Mr. W. Wickham, house-surgeon of the hospital, for the notes of the following case:—

Thomas H——, aged thirty-four, admitted into the above hospital on April 26th, with a loose cartilage in the knee joint. He stated, on admission, that ten years ago, whilst walking, he was suddenly seized with severe pain in the left knee-joint. It lasted for a few minutes, and then as suddenly left him. This occurred on several occasions for a month or two, when it disappeared. He was not troubled again with it till three years ago. He could now feel the loose cartilage at the inner side of the joint. About six months ago the joint became inflamed, for which leeches and blisters were employed, and he was obliged to keep his bed for a fortnight; and, on getting up, he found great difficulty in walking, and the joint was very stiff. He had another similar attack of inflammation in the joint three months since. On admission, the man's general health was very good; the left knee was rather larger than the right. On manipulation, the loose cartilage could readily be felt on the inner side of the patella. The patient walked with a stiff knee to avoid pain consequent on the loose cartilage getting between the ends of the bones.

May 12th.—The patient being placed under the influence of chloroform, Mr. Fergusson removed the loose cartilage, which was about the size and shape of a broad bean. The cartilage having been first brought to the inner side of the patella, and the leg straightened, a valvular incision was made over it, and, after some difficulty, it was removed by means of a scoop. Some synovial fluid escaped during the operation. The wound in the skin was closed, and the limb placed in a M'Intire splint. The patient was then removed to bed, and the limb swung.

13th.—The patient passed a very bad night; complains of great pain in the joint, which is much swollen and inflamed. Ordered sixteen leeches to the joint, and a pill containing three grains of calomel and half a grain of opium every four hours.

15th.—He is greatly relieved since the application of the leeches. Ordered poppy fomentations to the joint, and a saline draught with the pills every four hours.

17th.—The pain in the joint has returned, and the swelling increased. Twelve more leeches were applied, with much benefit.

18th.—He is much better; the wound is now discharging a thin fluid, consisting partly of synovia and partly of pus; the pain is much less, and the swelling has diminished. Poultices were applied to the joint.

29th.—The splint was this morning re-applied, with very little inconvenience to the patient, and he did not complain of any pain on applying firm pressure over the joint.

June 21st.—The splint was left off to-day, and the whole limb firmly bandaged. The wound in the joint is healed. The swelling in the knee-joint has greatly subsided; manipulation causes no pain. With the assistance of crutches he is able to walk about the ward.

He was discharged to go into the country on July 12th. At this time there was still some swelling of the joint, with very little motion; he could, however, slightly bend the knee without causing pain.

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UNIVERSITY COLLEGE HOSPITAL.

ANEURISM OF THE LEFT FEMORAL ARTERY, TREATED BY COMPRESSION; CONSOLIDATION OF THE TUMOUR WITHIN FIFTEEN WEEKS.

(Under the care of Mr. Quain.)

Aneurisms of the thigh are now known to be of less frequent occurrence than are those of the groin or ham, and this has been proved by the researches of Dr. Crisp. He found that out of 551 cases of aneurism recorded in the medical journals of this country during the present century, 137 affected the popliteal, and 66 the femoral artery. Of these latter, 45 were situated in the groin or upper part of the thigh, and 21 only were truly femoral.

A good example recently occurred in this hospital in a middle-aged man, originating in an injury received some months before admission; its situation was four inches below the fold of the groin, in the middle line. Compression was assiduously applied, off and on, for a period of fifteen weeks, with results that ended in complete consolidation of the aneurismal tumour and obliteration of the femoral artery above it, permitting the patient to be discharged from the hospital cured. The progress of the patient is accurately detailed by Mr. Charles Orme, Mr. Quain's house-surgeon, to whom we are indebted for the subjoined notes of the case. They very well show the difficulties that occasionally present themselves in adopting this mode of treatment, and yet, by perseverance and care, they were overcome, and the desired end was attained without the necessity of resorting to the ligature.

Samuel P——, aged forty, a dock laborer, admitted on the 10th of May. Lives in Lincolnshire. Is married, and has one child. At twenty he contracted syphilis, excepting which he has ever enjoyed good health. Last autumn, he struck his left thigh against the corner of an iron casting. He felt faint, but soon rallied, and was able to continue his work. Soon after, he observed a swelling at the site of injury. This did not hinder him from doing his work, consequently he did not regard it as of any importance. This swelling went away. Four months ago it returned, but he did not observe any pulsation till two months since. He was at once, on application to a medical man, recommended to come to this hospital.

May 10th.—There is a lump as large as a pigeon's egg in the left thigh, about four inches below the fold of the groin in the middle line. It is very firm to the touch, and pulsates strongly all over. Strong pressure on the artery at the pubes puts a complete stop to the pulsation. The small superficial cutaneous veins of the thigh are enlarged below the tumour, but not above it. The left leg pits on firm pressure over the tibia. Both legs are marked with brownish discolorations, which he says he has had since his attack of syphilis. A loud, harsh murmur is heard in the aneurismal swelling, synchronous with each beat of the artery.—Three o'clock P.M.: Carte's apparatus was applied, the pad of the instrument resting on the artery at the fold of the groin. The pressure was so applied as to considerably diminish, without entirely stopping, the pulsation.—Ten P.M.: Pressure was relaxed, as he complained of pain, and he was ordered forty minims of tincture of opium.

11th.—Did not sleep last night at all, although, in addition to the above, he had twenty minims of tincture of opium—Ten P.M.: Situation of pad altered, so as to press upon the artery a little lower down. The skin where the pad has hitherto rested is reddened.

12th.—There is some œdema of the thigh. Pressure was slackened, in consequence of pain. Slept last night after draughts of forty and thirty minims of tincture of opium—Ten o'clock P.M.: Complains greatly of body part of instrument. He has also pain throughout the limb, which is getting very œdematous. Limb bandaged from toes to groin.

13th.—Pain in limb and in back continues, where pressed by the instrument. The thigh is more swollen, the skin being rendered tense. The pad is now very frequently relaxed.—Seven o'clock P.M.: Apparatus removed. A superficial slough has formed where pressure was exerted by the pad, the skin around is reddened, and there are blebs. The aneurismal swelling feels smaller and harder, and the pulsation is less forcible. The bandage is now continued over the swelling, previously covered with a pad of cotton wool. The patient is in good health.

14th.—Œdema diminished. Bowels have not acted since the 9th. To have two aperient pills at night, and a black draught next morning.

17th.—Epithelium of part affected by pressure has come off, but there is little appearance of true skin being involved in the separation of tissue going on. The aneurism now feels the size of a small walnut. The limb is still confined by a bandage. Bowels regular. When the roller was re-applied, it was found that the limb had returned to its former size. To have ten minims of dilute sulphuric acid thrice a day.

19th.—The denudation of epithelium has extended; the skin around is reddened and slightly indurated. A poultice to be applied. The compress over the aneurism is now left off. The aneurism is smaller and harder, and the pulsation less forcible.

22nd.—The subcutaneous cellular tissue is slightly involved.

25th.—The wound is cleaning. The patient is comfortable and cheerful; appetite good; bowels open; pulse natural.

31st.—Wound clean, except a small spot in the centre. Cicatrization has commenced. The aneurism is smaller, and the pulsation less forcible. The leg is kept raised on an inclined plane.

June 8th.—Wound is healing rapidly. Patient now gets up.

14th.—Bandage re-applied.

28th.—The wound still remains open, the closure of which is somewhat tardy. Compresses or bandages appear to retard the healing process.

July 6th.—Previous exercise having produced slight increase in the pulsation of the aneurism, patient was confined to bed.

13th.—Ulcer healing rapidly. The patient is placed under a regimen preliminary to a further trial for the cure of the aneurism—viz., one-half extra diet, with milk; a drachm of sulphate of magnesia twice a day.

20th —Ulcer nearly healed.

26th.—To-day Carte's apparatus was applied.—Patient had been shaved thirty hours previously about the affected parts. He was placed upon his back, his head was raised, a pillow was placed under his buttocks, the affected limb was flexed, rotated outwards and supported in this position by means of pillows. Levigated French chalk was now sprinkled over the parts to be compressed. A folded sheet having been placed in the concavity of both groin and thigh apparatus, the instruments were adjusted in their respective situations. The latter (thigh) being left loosely applied, the former (groin) was screwed down, just short of producing pain, by which the pulsation in the tumour was considerably diminished, though not absolutely checked even to the touch. In less than one hour the patient complained of pain, and attributed this to the pressure of the pad upon the bone beneath, at Poupart's ligament. The course of the artery had been marked out in ink, and the pad was applied with its long axis in a vertical direction, its innermost margin not extending beyond the inner border of the artery. It was directed to a point, so that the centre of the pad fell about three quarters of an inch above Poupart's ligament; the pressure was in a direction directly downwards. The compress was now moved upwards a quarter of an inch, and the direction of pressure was made to incline upwards away from the ligament. At six P.M., the pelvic apparatus having been applied for three hours, the instrument attached to the thigh was now adjusted. This was done by screwing the pad down so that its long axis should be parallel to Poupart's ligament, and the direction of pressure slightly outwards against the bone, and in a situation between the cicatrix of the slough and the tumour—that is, about three quarters of an inch above the upper border of the sac. The compress having been screwed down sufficiently to produce a visible effect upon the pulsation of the tumour, the instrument in the groin was relaxed, and the pressure then modified in the thigh, in accordance with the feelings of the patient. At nine P.M., the patient having made no complaint, the greater portion of the pressure was taken off, in order that he might pass a comfortable night, which in the morning he said he had done.

27th.—The pelvic pressure was re-applied. When the pad was released from the thigh, there was considerable redness, and in an hour a vesicle, of the size of a cherry-stone, rose. At two P.M., pressure was again changed, the pad being made to escape the vesicle. At six P.M., pressure was alternated. During this day the patient has made no complaint, excepting now and then requesting that the compression might be slightly relaxed. During the whole period of this second trial the limb has been encased in a blanket, and a cradle fixed to protect the instruments.

29th.—The vesication in the thigh having increased to an ulcer as large as a shilling, and the old sore having again opened, little has been done towards the furtherance of the cure in the interval. To-day a ten-pound weight was placed over the artery in the pelvic region, while a five-pound weight was applied to the tumour itself. These were made to alternate with one another at short intervals. But this was soon discontinued, as it was found that the new skin was unfitted even for the slight irritation produced by this pressure.

August 6th.—The weights were once more applied.

11th.—The pulsation is much less strong.

19th.—Since last report the patient has been left almost entirely alone. He has been permitted to move about as he pleased during the greater part of the day, and only in the evening, and that not every day, has a small weight (five pounds) been applied to the tumour. To-day Carte's apparatus was applied for four hours to the artery above Poupart's ligament. This produced a very visible effect. There is no pulsation seen; the impulse is by no means strong, and the extent of it from side to side appears to be about an inch and a half, and its length about the same.

22nd.—To-day spirit of wine was applied over the tumour, and the lint was kept constantly wet for twelve hours. Examination showed that pulsation was now scarcely perceptible to the hand on pressure. A five-pound weight to be constantly kept on the tumour, and the patient strictly prohibited leaving his bed.

25th.—This morning pulsation had entirely ceased. When the stethoscope was applied, the circulation was found to extend to within three quarters of an inch of the aneurism. This was five hours after pulsation had ceased, which occurred, acccording to the patient, at five A.M. The patient had suffered no pain at the time, nor was there any change in the appearance of the limb at the period of inspection. The limb was of a natural temperature, although both the tibial arteries pulsated feebly. The only other difference as regards the circulation in this limb was, that the superficial arteries on the inner aspect of the upper third of the thigh were more distinctly felt than in the opposite limb. It was wrapped in a blanket, and kept in a raised position. The patient was ordered to keep quiet. The medicine was suspended; and he was placed on a full diet.

28th.—The patient permitted to get up, the tumour remaining consolidated. A pint of beer was ordered.

31st.—Discharged.

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MIDDLESEX HOSPITAL.

COMPOUND DISLOCATION OF THE ELBOW—THE RADIUS AND ULNA THROWN DIRECTLY OUTWARDS; REDUCTION, WITH GOOD USE OF THE JOINT.

(Under the care of Mr. FLOWER.)

OF the various and complicated displacements to which the elbow is liable—and they are numerous enough—*complete* lateral dislocation is so rare, that there is but a single instance on record that we know of, and this appears, with a woodcut, in the second volume of Nélaton's "Surgical Pathology," p. 391. Most surgeons are aware that, as usually encountered, lateral dislocation is invariably incomplete, the appearances indicating which are described in most surgical works.

The symptoms of *complete* lateral dislocation, as detailed by Nélaton, are as follows:—The radius or the ulna forms on one of the sides of the articulation a projection, easily recognised; whilst the inferior extremity of the humerus becomes prominent on the opposite side. Two depressions are also noticed, corresponding to the hollow which exists above the humerus, or beneath one of the two bones of the forearm. Further, the triceps forms a slight projection behind, and deviates from its normal position by directing itself towards the side upon which the forearm is carried in the displacement. The forearm and the hand are inclined outwards in the luxation inwards. The limb is fixed in its position, and can, with some pain, execute certain light movements.

It will be observed that the great diagnostic sign is the absence of the projection of the olecranon process of the ulna backwards. All the symptoms are not described in Mr. Flower's case, but the displacement was readily made out to be directly outwards, and it was reduced with facility.. The joint was laid open by the injury, with the escape of synovia; and the lower end of the radius had sustained a comminuted fracture. Altogether, it was a very complicated as well as a rare case; a good recovery, however, ensued, with very fair motion.

J. H——, aged thirty-four, a laborer, in good health, who fell down from a height of twenty feet upon a boarded floor, was admitted into Clayton's ward, Aug. 27th, 1860. The left radius had received a comminuted fracture close to the lower end, but without great displacement. The bones of the same forearm are both dislocated directly outwards at the elbow. The inner condyle was extremely prominent; and just below it is an irregular wound, about the size of a shilling, with contused edges. Through this the cartilaginous surface of the trochlea of the humerus was readily seen and felt, and synovial fluid was escaping from it. The bones were reduced without difficulty by the house-surgeon, Mr. Worthington, by means of slight extension, and the wound was closed with a piece of lint, fixed over it by strapping, an angular wooden splint put on the arm, and cold water constantly applied to the elbow.

Aug. 29th.—Much swelling of the elbow-joint, and effusion into the bursa over the olecranon. The angular splint was removed, and a straight one applied only to the radius. The elbow was laid on a pillow, and kept cool. Water-dressing to the wound.

30th.—The elbow less swollen, and not at all painful.

Sept. 1st.—Swelling of the elbow nearly all gone; wound granulating: the communication with the joint appears closed up.

In a fortnight, gentle passive exercise of the arm was commenced. This gave rise to no pain.

25th.—Discharged from the hospital; wound quite healed; has very good motion in the elbow-joint; can flex it himself, though he cannot yet completely extend it.

METROPOLITAN INFIRMARY FOR SCROFULOUS CHILDREN AT MARGATE.

DISEASE OF THE HIP-JOINT OF FIVE YEARS STANDING, IN A BOY AGED TEN YEARS, WITHOUT DISLOCATION OF THE FEMUR; EXCISION OF THE ENTIRE JOINT; RECOVERY.

(Under the care of Mr. P. C. Price.)

The following two cases show the great advantages of surgical interference in advanced hip disease. In the first, the entire hip-joint was excised in a lad who was almost at the point of death, and who immediately after the operation began to rally, and has since satisfactorily advanced towards recovery. It is one of those instances which was formerly considered as totally unfit for operation, but experience has proved that such cases may be submitted to operative treatment with the best results. The second example was one in which the disease had existed for as long a period as in the other, but it was confined almost solely to the head of the femur. Its removal has been attended thus far with the happiest results. In neither of these cases was there dislocation of the head of the bone.

G. W——, a lad of a decidedly scrofulous constitution, with red hair and blue eyes, was admitted into the above infirmary during the summer of 1859, under the care of Mr. Price. At this period he was wasted to a shadow and confined to his bed, which he had kept for many months. His health was completely shattered, and constant pain had reduced him to the last stage of exhaustion. For between four and five years he had suffered from disease of the right hip-joint, which had gradually crept through various stages till it arrived at the condition presented by it on admission.

The following were the appearances observed at the end of two months, when, all remedial treatment having only partially succeeded in improving his condition, operative measures were first contemplated:—

"The right hip-joint has the appearance of being greatly diseased, and is probably totally disorganized. The buttock has almost entirely disappeared; and one or more sinuses open near to the situation of the great trochanter and on the inner side of the thigh, which allow the escape of very unhealthy-looking semi-purulent matter. The thigh, which is much attenuated, is drawn across its fellow; and the leg, which has not been placed to the ground for a considerable period, is likewise wasted, and flexed on to the thigh. The boy lies in bed on his left side, and the spine has, from the curious posture he assumes, become twisted. The chest is thrown forward. The slightest pressure cannot be made over the greater trochanter without causing excessive pain. The right hand is constantly employed, day and night, in maintaining a fixed position of the limb, to prevent the recurrence of pain, which occurs on the slightest movement. Although the buttock is much wasted, so that the lines of the pelvis can be readily detected by passing the hand over the region, yet to a superficial examination the head of the femur appears to be dislocated from its socket. A more careful manipulation, however, and a strict attention to certain points prove that the head of the thigh-bone is not really displaced from the acetabulum. A probe passed along one or more of the sinuses fails to detect any carious bone, although ample evidence exists as to considerable implication of osseous structure."

Considering the apparent extensive mischief that existed, the constant and distressing pain that was daily tormenting the little patient, and the probability of life lasting but a very short time longer, Mr. Price, on the 29th October, 1859, had the patient placed under chloroform, and, having detected the amount of mischief that was anticipated, opened the articulation, and removed the head of the femur by cutting the shaft through in the immediate site of the great trochanter. Not a vestige of cartilage remained on the head of the bone, and in places the bone itself was eaten into. In various parts the acetabulum was necrotic, and several small portions were found lying loose. All suspicious points were freely removed by the gouge and semicircular cutting pliers. To complicate the proceeding, a large abscess was detected lying internal to the pelvic bones. This was freely opened, and a clear exit given to its contents. The parts—the cut end of the femur and the rim of the acetabulum—were carefully adjusted, and secured by means of a long side splint made expressly by Mr. H. Bigg.

For some little time after operation the pain complained of was more constant than is usual, but was greatly relieved by the administration of morphia. Suppuration likewise was very copious and continuous. At the end of two months the little fellow was considered out of all danger. He still continues in the recumbent posture, although he is drawn about in a chaise. The wound, which was necessarily o large dimensions, owing to the extent of hard structure removed, has, however, gradually closed, and consolidation is fast advancing. The general health has greatly improved, and the boy has in a great measure regained his original good condition. No movement has as yet been permitted, but the leg and thigh are gradually gaining strength, so that it is more than probable that the patient will one day be in a position to make good use of the new joint that is forming.

DISEASE OF THE HIP OF FOUR YEARS' STANDING IN A BOY EIGHT YEARS OF AGE; ABSENCE OF DISLOCATION; EXCISION OF THE HEAD OF THE THIGH-BONE; RECOVERY.

(Under the care of Mr. Price.)

J. F——, aged eight years, a thoroughly strumous boy, was sent to the Metropolitan Infirmary for Scrofulous Children at Margate, in the early part of 1859, on account of disease of the right hip-joint, which confined him to his bed. The history obtained from the child was very brief. He could not tell how the affection of his hip originated, but remembered being in a parish workhouse for a long period. For years he had suffered extreme pain, but latterly the local distress had been much increased, so that hectic fever, night sweats, loss of appetite and spirits had greatly reduced his former somewhat robust constitution.

In the early part of the present year the pain became so severe, and the effect on the constitution so marked, that Mr. Price anticipated that the head of the femur was seriously involved in a destructive process. The attitude assumed by the patient was indicative of severe joint mischief. He lay with his body flexed and curved, and the thigh of the diseased side acutely bent at the hip so as to cause the trochanter to project, giving an impression that the head of the femur was displaced from its cavity, which it really was not. The slightest pressure over the great trochanter caused sudden and piercing pain in the interior of the joint.

All remedial treatment having failed in procuring that amount of ease which was so earnestly desired, Mr. Price had the little fellow placed under the influence of chloroform on the 10th of January last, and having opened the articulation by slitting up one of the two sinuses which existed about the joint, readily discovered that the head of the bone was deprived of its cartilage, and the cavity of the joint filled with unhealthy-looking pus. Not a vestige of synovial structure existed. The ligamentum teres was destroyed; but the floor of the acetabulum was but slightly affected. The leg, which was flexed at the joint, was forcibly straightened, some ligamentous bands giving away with a sharp crack. The wound was closed with two points of suture; a long side splint applied, and the patient removed to bed.

Dr. W. P. Price, who had the daily management of this case, as well as the former, writing regarding it six weeks after the operation, says: "I have no particular notes regarding F——'s case after operation, for the relief has been so great, and the reparation so rapid, that not a simple symptom has arisen to cause me the least annoyance. His health and strength have much improved, and it is one of the most satisfactory results we have had." The boy is now out of doors, and there is every probability of his gaining in time a most useful limb.

The history of these two cases thus rapidly detailed will at a future time be referred to, so that the actual state and utility of the limbs may be recorded.

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NORTHAMPTON INFIRMARY.

DEATH FROM CHLOROFORM.

(*Communicated by* J. FOSTER GRAY, ESQ., F.R.C.S.)

P. C——, aged forty-two years, a tall, stout, muscular Irishman, was admitted, under the care of Mr. Mash, Sept. 1st, 1860. He was the subject of a lipoma, about the size of a closed hand, seated in the middle line between the upper border of the scapulæ. On September 6th he was taken into the operating room for the purpose of having this removed. As the operation was considered neither dangerous nor very painful, he was strongly dissuaded by his surgeon from taking chloroform; but he, nevertheless, expressed an urgent desire that it should be administered. After consultation with Mr. Ashdown, as there seemed on auscultation to be no special contra-indicating circumstances, his wish was acceded to, and the chloroform was accordingly given by Mr. Gray, the house-surgeon. It was administered on a single fold of thin lint, and after three or four minutes' inhalation the patient became excited and delirious, struggled a good deal, and talked incessantly. In the course of about eight minutes more these symptoms subsided, the face became much congested, and the breathing stertorous. At this time the pulse was full and regular, and the orbicular acted distinctly though rather sluggishly. The administration of chloroform was then wholly suspended, and the patient, being deemed in a fitting state for operation, was turned over on the left side in order to expose the tumour. This position being found inconvenient, a further change was required to adapt the head and shoulders on pillows, so as to expose the tumour effectually, and in the process of effecting this, respiration was observed suddenly to cease. The tongue was immediately drawn forward by artery forceps, cold water freely dashed over the face and chest, and artificial respiration was forthwith commenced by Marshall Hall's Method, aided by forcible compression of thoracic walls. At first the result of these means appeared most satisfactory, three or four deep muscular inspirations and several feebler efforts being made by the patient. The venous system of the face and neck being very turgid, the external jugular of either side was opened, and bled rather freely. Electro-magnetism also was applied as promptly as possible, the artificial respiration being unceasingly continued; but though the measures for restoring animation were continued for an hour, no further indications of vitality were manifested by the patient. No pulse or heart beat was detected after the first suspension of respiration, but the immediate resort to artificial breathing prevented any very deliberate examination of the pulse.

The chloroform seemed quite pure, and the total quantity consumed during the process of inhalation was nearly five drachms and a half. The patient was known to be intemperate, and has since been ascertained to have been an inveterate drinker.

Autopsy twenty-three hours after death.—Externally, the face appeared rather pale than livid (probably as a result of the venesection), and there was no more than usual ecchymosis of the depending portions of the body. The head was first opened. The dura mater was slightly adherent along the course of the longitudinal sinus; the glandulæ Pacchioni were of large size, and there was some subarachnoid effusion; but the membranes themselves appeared healthy. The substance of the brain was firm and natural; the puncta vasculosa were numerous and of a dark venous line. The lateral ventricles contained about two drachms of fluid; and the medulla oblongata and cerebellum, like the brain, were much congested, but presented no other evidences of disease. The lungs were gorged with venous blood, but otherwise healthy; the pleuræ smooth and unadherent. There was no pericardial effusion: the heart was large and flaccid, and there was an unusual accumulation of fat on its outer surface. Its muscular tissue was soft, and the walls of the ventricles, especially the left, were thinner than natural, but not otherwise unhealthy. The right chambers were greatly distended, the left comparatively empty. The blood was quite fluid throughout; the valves, endocardium, and vessels at the base were normal. The heart weighed ten pounds, the aorta and other vessels being cut off close to its base. There was an excessive deposit of fatal external to the abdominal walls, as also in the subperitoneal cellular tissue and throughout the great omentum. The abdominal viscera, like all the other organs, were greatly congested, but exhibited no further indications of disease.

THE HEALTH OF THE MINER.—Recent deductions from tables, showing the duration of the life of the miner, prove that at the age of 20, miners experience an average of 46 per cent. of sickness more than the general class; at the age of 30, they show 70 per cent.; at 40 years, 78 per cent.; at 50 years, 76 per cent.; and at 60 years, 53 per cent. more than the ordinary class of lives. It has been ascertained that in Cornwall 61 per cent. of the miners die of diseases of the chest, and only 31 per cent. of the rest of the population.

Clinical Records.

CONNEXION OF CANCER OF THE BLADDER WITH CALCULUS. CASE AND AUTOPSY.

The pathology of cancerous affections is yet far from being so defined as to admit of a decision upon the part played in the development of cancerous growths by local irritation. Yet it is well known that the continued action of locally irritating causes will favor the appearance of malignant disease. Thus malignant fungous growths of the mucous membrane of the tongue and cheek have frequently been observed in connexion with a carious tooth or piece of diseased bone; so too with the supposed origin of the chimney sweep's cancer. M. Civiale and Mr. Coulson, in their respective works on the bladder, consider it an open question as to what extent cancer of the bladder may be due to the irritation of vesical calculus. M. Civiale is inclined to think that the long continued irritation of stone in the bladder is not without influence in the development of fungoid and other tumours about the neck of that organ. The case of a patient who was lately in the female operation-ward of St. Mary's Hospital, under the care of Mr. Coulson, adds an additional instance in which calculous irritation has been coincident with, if not productive of, fungous growth of this kind. This woman, aged sixty-three, had been supposed to have a stone in the bladder, and she suffered acutely from all the most painful symptoms of that disease. On sounding her a hard substance was felt; but Mr. Coulson arrived at the conclusion that no stone existed in the bladder, and that the symptoms were due to calcareous deposit around the neck of the bladder, extending into the urethra. The patient was subject to frequent fits of retention, and the passing of a catheter was an operation which was attended with serious discomfort. A microscopic examination of the urine further disclosed the presence of large, freely-nucleated cells; Mr. Coulson, therefore confined the treatment to the employment of morphia, sesquicarbonate of ammonia, the use of the catheter, and local palliatives. The patient sinking under the exhaustion, the necropsy verified the observations made during life, by disclosing a highly inflamed state of the mucous membrane of the bladder; a fibrinous coating extending over the base, which was almost in a sloughing condition; a mass of soft cancer occupying the trigon; and calcareous deposit extending into the urethra.

From a pathological point of view this case must be considered very interesting, although in the present state of science it belongs to a class for which the medical art offers only palliative resources.

PECULIARITIES OF STONE IN THE BLADDER.

Stone in the bladder somewhat resembles hernia, in the peculiarity that no two cases are precisely alike. Of three instances of the former, operated upon within the past few days at St. Bartholemew's Hospital, all differed In their general characters. The first of these was that of a man, forty-five years of age, the subject of calculus for many years, without any great amount of suffering. Lithotomy was performed on the 5th inst, by Mr. Lawrence, and a lithic-acid stone was extracted. The third day after the operation he was able to retain his urine within the bladder without its dribbling from the wound, and could pass it by the natural channel, although some of it would at the same time be forced through the wound.

The second case was that of a child, six years of age, who was operated upon by Mr. Wormald, on the 6th inst., and an hourglass shaped stone was removed. One half of it was projecting into the bladder, whilst the other was lodged in the urethra, and a sound could not be passed in the usual way into the bladder. Mr. Wormald made an incision across the perinæum, as in the bilateral method, and another on the left side, at an angle backwards, which permitted the stone to be readily extracted after cutting into the urethra and bladder.

The third example was that of a child of the same age as the previous one, who was sounded for stone, on the 7th inst., by Mr. Paget and four of his colleagues; and although the symptoms of stone were manifest enough, its presence could not be detected. He was again sounded on the 11th, and this time it was made out. The child was turned on either side as well as on his back, and in each position the stone was felt. Mr. Paget performed the usual lateral operation, but made several ineffectual attempts to remove the stone with the forceps. He introduced his finger, and felt the stone lying beneath a fold of the mucous membrane of the bladder, and, with the aid of a scoop, readily extracted it. The boy, although so young, had, what Mr. Paget believed to be, tuberculous disease of both testicles, and he thought it probable that the bladder was affected with the same only in an ulcerated state; hence its present lax condition. After recovery from the operation, this child would be still subject to troublesome urinary symptoms, although he might be free from stone. The shape of the stone was that of a bit of enlarged pencil, and its composition lithic acid; whilst that in Mr. Wormald's patient was, we believe, triple phosphatic.

All these patients are progressing most favorably.

FATTY TUMOURS ENCIRCLING THE NECK.

Experience has proved that there are but few situations about the body which have not been invaded by fatty tumours, although some are more favorable for their growth than others. Either side of the neck, and behind it, are much commoner sites for their development than the anterior or submental part. An instance of tumour in this rarer situation was recently admitted into Guy's Hospital, in a stout, robust man, about forty-five years of age. The anterior half of the neck, from one mastoid process to the other, was occupied by a large fatty tumour, which assumed the appearance of an enormous double chin, and extended as far down as the sternum. Two other tumours of the same character existed symmetrically at the back of the neck, in the suboccipital spaces; they were as large as a flattened orange, prominent, and altogether imparted a most curious appearance to the entire cervical region. These three tumours commenced to grow some years back, but latterly had increased somewhat rapidly in size, so much so as to cause some uneasiness lest they might turn out to be malignant. Their true nature was determined by Mr. Cock, who removed that in the right suboccipital space, whilst the patient was under the influence of chloroform, on the 10th of July, with good results. It did not possess a lobulated character, but was very firm and hard, strongly adherent to the skin, and was got away with some difficulty, being associated with free hæmorrhage. From this operation he completely recovered. Mr. Cock contemplates the dissection of the opposite growth, but will not interfere with the anterior cervical.

GOOD EFFECTS OF BLEEDING IN ACUTE LEPRA.

Although bloodletting is recommended by Gilbert and other writers on skin disease at the commencement of cases of lepra, besides the regiminal and medicinal treatment, it is not often that we see it put into practice. A case, however, came under our observation a few days back at the Charing-cross Hospital, in which venesection to the extent of ten or twelve ounces was followed by the best results. The patient is a stout plethoric woman, twenty-four years of age, who was admitted under Dr. Willshire's care, with her body covered with lichenoid papules. The skin was as rough as shagreen or nutmeg-graters, the intervals between the papules being of an intensely red color. This eruption appeared in the course of a single night. The small venesection was followed by the most sensible relief, and she was then ordered half-drachm doses of bicarbonate of potass in the infusion of dulcamara. Under this treatment the eruption disappeared in a week's time, the skin subsequently desquamating, as is witnessed after scarlet fever. Her diet consisted chiefly of milk and eggs.

In the same ward we observed another example of lepra, in a female of thirty years of age, which was not unlike the syphilitic form; here the patches were interspersed with roseola; the eruption arose from drinking cold water while the body was in a heated condition. The patient was rapidly improving under the use of bicarbonate of potass and small doses of the iodide of potassium.

NECROSIS OF THE STERNUM.

The fact is well known to surgeons, that when necrosis has attacked any of the flat bones, the separation of the sequestrum is a tediously long process, even if it should occur at all. The denuded, or we may say carious surface, may remain rough and exposed for a considerable period, sometimes even for several years. This is the general experience with the pelvic bones, the scapula, and the sternum. The destructive influences often penetrate pretty deeply into the last, owing to the circumstance of its being less compact and firm in texture than the other bones. The spongy structure readily crumbles away by the ulcerative process, and the minute fragments are thrown off in the secretions. The cure of a carious condition of the sternum is, therefore, not very readily accomplished, unless the affected parts are removed with the aid of a gouge, and care be taken that the pus or other secretion does not burrow over the bone. We have noticed some six or seven instances during the past few years in which patients were under treatment in our hospitals for disease in this situation, and, perhaps, the majority of them were the result of strumous abscesses. The cure of the greater number of them was tedious, although it was effectual.

Another case of the kind is at the present time in St. Mary's Hospital, under Mr. Walton's care, in the person of a young woman, aged twenty-one, with a well-marked strumous diathesis, and who has previously been the subject of abscesses in other parts of the body, as evidenced by the presence of numerous cicatrices. About eighteen months ago a lump spontaneously formed over the upper third of the sternum; this suppurated and burst, and a sinus was left about two inches in length, extending down to the bone, which was in a carious condition. On her admission, the sternum all around was much swollen, and the parts tender, as if encircling an actual sequestrum. None, however, has been found. The sinus was slit up, and the old wound laid open to the bottom, since which, free suppuration has become established, healthy granulations are springing up, and there is a prospect of the morbid process being stopped.

On the 5th ultimo, a female was brought into the operating theatre of King's College Hospital, with necrosis of the sternum, and disease of the costal cartilages, the result of a strumous abscess in the breast five years before. Sinuses had formed in various directions; some of them were subcutaneous, whilst others were deep, and burrowed amongst the deeper tissues, especially implicating the subjacent osseous and cartilaginous structures. As the patient was very nervous and irritable, most of these were slit up under the influence of chloroform, and the surface of the sternum was exposed, rough and denuded of periosteum. The carious surface was gouged away, and a spicula of dead bone was removed from the superficial part. Free and healthy suppuration has become established, and under the use of good diet and tonic remedies, it is expected that the parts will assume a healthy character, and completely heal up.

WELL-MARKED SYPHILIS IN A FEMALE CHILD AGED TEN YEARS.

When a young child, the subject of primary syphilis, is brought before a surgeon, the disease is usually found to depend, in some way or other, upon the accidental contact of the poison by means of the clothes of an adult person, who may possibly be a near relative of the child. This occurrence is by no means so rare, amongst the children of some of the poorest and most abandoned of our population, as might at first be supposed.

A case differing very much from such a condition of things, however, was recently in President ward of St. Bartholomew's Hospital, under Mr. Lawrence's care. A little girl, ten years old, the child of humble but clean and respectable parents, was admitted, on the 19th of July, with a series of mucous tubercles on both labia, excoriations of the perinæum and verge of the anus, together with ulceration of the tonsils and hard palate. She had, besides the foregoing, a secondary leprous eruption about the arms and body. Her mother knew nothing about these, but the child confessed to having had carnal connexion with her cousin, a lad of fourteen years, and no doubt was contaminated by him. There was no evidence of penetration, because the hymen was entire, its aperture being of the size of a goose-quill. She was otherwise a stout little girl, and well developed in every way.

She was treated in the usual manner by small doses of grey powder and other medicines, and rapidly improved in her general health.

Her case is a very instructive one in a medico-legal point of view, for here we find that efforts at connexion had voluntarily been made by a mere child, without any success beyond penetration of the vulva, yet it is followed by the communication of primary syphilis from a lad of fourteen years. It would have been interesting to have obtained the history of the boy in this case.

EXOSTOSIS ON THE ANTERIOR BORDER OF THE SCAPULA, NEAR ITS INFERIOR ANGLE.

On the 14th ult. we saw Mr. Cook, at Guy's Hospital, remove an exostotic growth, of the soft or spongy variety, from the anterior surface of the scapula of a boy, near its inferior angle, but encroaching upon its posterior border. To effect its extirpation, after chloroform was administered, the boy was placed upon his left side, slightly turning over on his chest; the arm was drawn forwards so as to elevate the posterior border of the bone, and an incision was made over it. After some little dissection, the bony growth was felt anteriorly pressing upon the ribs. By the aid of the cutting pliers, it was removed piecemeal, and its base left comparatively smooth. This latter was broad and extensive, but altogether the dimensions of the tumour were equivalent to a full-sized walnut, and in composition it was a mixture of the cancellous and cellular structures of bone. Although it had been present for some time, its growth was tolerably rapid, and, from its peculiar and most unusual situation, it caused very great inconvenience and discomfort to the poor boy.

We may observe that tumours of the posterior surface of the scapula are by no means rare. We recollect the late Mr. Liston removing three-fourths of this bone for a vascular tumour of this surface; and we have now and then noticed the presence of bony growths springing from the same aspect, although they are not usually interfered with unless they are productive of inconvenience to the patient. On the other hand, growths upon the anterior surface are of very uncommon occurrence.

The wound is freely suppurating in Mr. Cook's patient, and there is no doubt that he will make a good recovery.

GONORRHŒA WITH ARTICULAR RHEUMATISM.

Gonorrhœal rheumatism is an affection as to the pathology of which surgeons still differ greatly in opinion. Sir A. Cooper is stated to have been the first surgeon who publicly described this affection, which he considers "not an unfrequent disease," and portrays graphically his first case. (Surgical Lectures, pp. 273-74.) Sir Astley Cooper remarks, at the conclusion of this case: "Whether it is by absorption of the poison, or the constant irritation produced by the inflammation of the urethra, I do not know; but certain it is that gonorrhœa produces ophthalmia and rheumatism, and when not a single drop of matter has been applied to the eye." The concurrence of articular rheumatism with gonorrhœa is so often observed, and under circumstances so strongly favoring the belief in the kind of connexion arbitrarily called metastatic, that probably the majority of surgeons incline to the retention of the term "gonorrhœal rheumatism" in our surgical nomenclature, and hold to the theory which such a phrase indicates. These opinions are opposed by many modern surgeons, who see here nothing more than a coincidence of the two diseases, and consider that they have no causal relation. They are, however, strengthened by the observation of many cases which come under notice in the course of a wide experience, in which acute rheumatism attacks a patient suffering with gonorrhœa, who has never had any previous rheumatic tendency, and had not been subjected to damp or to any other ordinary causes of rheumatism; the discharge from the urethra disappearing as the joint-affection is developed, and reappearing as it is cured. Sometimes these attacks of articular rheumatism, inaugurated by a first attack of gonorrhœa, are repeated on subsequent attacks of the latter. Most of these critical points were present in the case of J. B——, aged twenty-three, admitted into St. Mary's Hospital under Mr. Coulson's care. He was healthy and robust, and had contracted a gonorrhœal running some two months prior to admission, which still continued. He had not been exposed to the weather, and knew of no way in which he could have contracted rheumatism, but when admitted he was suffering from strongly-marked rheumatic pains and stiffness in the neck, with articular rheumatism of the right knee-joint. He was fearful of being laid up for a long time, as during a previous attack he had suffered greatly from rheumatic inflammation of the left knee. Mr. Coulson ordered for him ten grains of Dover's powder and two grains of calomel at night, with three grains of iodide of potassium and ten of the bicarbonate of potash in camphor mixture every four hours; local warmth and anodynes to the painful parts. The pains and swelling abated under this treatment, and tonics were successfully employed to bring about convalescence. The discharge from the urethra now becoming troublesome, Mr. Coulson ordered a weak solution of nitrate of silver to commence with—one grain to four ounces; and this being properly regulated in strength, and a careful diet observed, the man was discharged cured.

This case was one which seemed to illustrate well most of the points which have induced a belief in the direct connexion between gonorrhœa and rheumatism. The treatment which succeeded so well here was simply directed to the cure of the rheumatism in the first instance, leaving the gonorrhœa, no longer inflammatory, to be subsequently treated by injection.

FRACTURE OF THE OS CALCIS OF BOTH FEET.

Fracture of the os calcis is commonly the result either of direct violence or of muscular action in the calf of the leg; the injury being frequently induced, in the former case, by a jump from a height to the ground. One of the most perfect examples of this accident which we have seen for a long time is at present in the Royal Free Hospital, under Mr. Weedon Cook's care. The patient is a painter, forty-eight years of age, and was admitted on the 26th of July. He states that whilst pursuing his avocation, the ladder on which he was standing suddenly slipped, and, to save himself from falling, he jumped to the ground, (a height of fifteen feet,) alighting forcibly on his heels. He immediately fell, and was totally unable to walk. On examination, no displacement of any of the bones could be detected, but crepitation was readily observed on moving both heels, the fracture in each limb appearing to have extended into the calcaneo-astragaloid articulation. Besides the crepitus, there were pain and ecchymosis at the outer ankles. The left ankle was more painful than its fellow at the outer malleolus, and was also much more swollen. There was some slight inversion of both feet, but their position otherwise was natural, showing that the lateral and interosseous ligaments were intact. In the treatment, every effort was made by means of M'Intire's splints and suitable bandages, to keep the feet at rest, and inflammatory action was thus kept under. The splints were flexed at a moderate angle, so as to keep the muscles properly relaxed.

When we last examined this patient, on the 16th ult., osseous union had apparently taken place, and a recovery, with useful feet, was hopefully anticipated. We may remark, that crepitus, though very distinct in this instance, is not usually detectible in injuries of this nature.

LACERATED WOUND OF THE THUMB, EXTENDING INTO THE CARPO-METACARPAL JOINT.

The notes of the following case were furnished by Mr. Berkeley Hill, late house-surgeon to University College Hospital:—

A. K. H——, aged twelve, a delicate-looking lad, was admitted on the 3rd of April last, under the care of Mr. Erichsen. The boy, half an hour previously to his admission, had been pouring a quantity of detonating powder from a flask into a fire, when the powder exploded, and the force of the explosion tore open the root of the thumb in the following manner:—A lacerated wound passes across the hand, from the web between the thumb and forefinger to the front and back of the wrist. In this way the tissues are separated between the first and second metacarpal bones, so that on lifting up the thumb the metacarpo-trapesial articulation becomes exposed, and the articular surface of the trapezium bone visible. The tendon of the flexor proprius pollicis, and those of the extensores primi and secundi internodii pollicis are uninjured, as the boy can bend and straighten the last joint of the thumb, though no longer able to adduct it towards the palm. The circulation beneath the nail of the injured thumb is apparently almost as good as that going on beneath the others. There has been very little hæmorrhage, the vessels having been torn across. Sensation is very good also. The large artery and nerves of the thumb have escaped injury; this is shown by the non-impairment of circulation and sensation. From the absence of injury to the large vessels, it was determined to save the thumb if possible; so the edges of the wound were brought together, the thumb retained in its position by strips of plaster, and the hand supported on a splint, with lint dipped in cold water laid over the hand. By the 21st of April the wound had nearly healed, partly by adhesion and partly by granulation. No sloughing or excessive inflammation occurred during the progress of the cure. By the beginning of May the wound had completely healed, and some adducting power already regained over the thumb.

Editorial.

ADDRESS TO STUDENTS.

A mingled feeling of hope and anxiety arises on contemplating the varied emotions of those whose youthful aspirations have brought them to the commencement of that career of usefulness which so eminently belongs to Medicine. Few can behold with indifference the arrival of so many young men, fresh from the tenderness and solicitude of their homes, thus embarking on the rough and dangerous sea of life in any of the great towns in which there is a Medical School. Happy the parents who have so nurtured their offspring, so fortified them with fixed and sterling principles, that they can without fear trust them to the temptations and follies of town life; and happy the youths who, thus brought up and instructed, shall retain throughout all trials the uprightness and honor which may be the only hereditary endowments they can boast. Standing on the threshold of their career, we offer them words of encouragement and welcome,—welcome to the scene of the labors of the most distinguished and successful in the profession they have adopted; and encouragement to persevere steadily and earnestly in imitation of those who have added lustre to our calling.

In thus welcoming students to the schools of the medical and allied sciences, our desire is to lay before them the valuable and comprehensive advantages which, for the purpose and study of their profession, are now offered to them. We will point out to them how these advantages may be turned to the best account; and we wish emphatically to impress on them, that while the teachers under whom they place themselves have undertaken an onerous yet generous responsibility, the student also has duties equally responsible and equally grave. We desire to hold up to the ambition of the diligent the rewards and valuable opportunities which industry may obtain; but we are bound also to warn the idle and unreflecting of the place which in the race of life it will inevitably be their lot to fill.

There is much to encourage and much to incite the student on his first entrance to an hospital. Large, well-ventilated, commodious wards; every appliance which modern art can suggest for the treatment and reliefof patients; beds neat and cleanly, filled with almost every form of accident or disease—a field of observation of inexhaustible wealth, if the harvest which is there be properly reaped and gathered; museums rich with illustrations of natural and diseased structures; lecture-rooms airy and comfortable, with apparatus and means of illustration appropriate and well-selected;—everything, in fact, calculated to impress with attractiveness the youthful mind, and make him almost feel that the path before him is without difficulty or obstacle, and that he has chosen a road which no dulness or mental insufficiency can miss.

But let him not be so deceived. These are but the aids and helps, the guides and charts for his course. He must apply himself to understand the principles on which the utility of his profession rests; and the sciences which minister to this end must be first acquired. It is only by his own energies and diligence—it is only by patient and persevering industry, that the fundamental laws of structures and functions can be learned. Diagrams and illustrations may assist him to comprehend things which at first appear difficult; but in order to fix immutably on his mind the facts which Anatomy and Physiology will teach, great and assiduous application is imperatively necessary.

The practice of recording and making public exceptional or instructive cases from the wards of the hospitals, those especially which illustrate practically some fundamental doctrine in Medicine and Surgery, largely contributes to the advantage of the student. We can claim for THE LANCET the initiative in thus giving publicity to the results of hospital experience; and we can, without fear of contradiction, tell the student that to the efforts this journal has unceasingly made to advance the interests of the many in place of the interests of the few,—that to the example of THE LANCET, in making the profession acquainted with the experience of those who were the earliest and most active collators and expounders of hospital cases,—that to the exposure by this journal of the laxity and indifference of hospital officers, and to our unceasing advocacy of the more practical methods of teaching which are now generally adopted, the student owes the increased advantages which his residence in the metropolis, or elsewhere, now offers him. Incentives to study and to diligence will be found in every hospital school; many of the lecturers are distinguished by the personal interest they take in the welfare of those who study under them, and good advice will not be wanting from the many gentlemen whose inaugural addresses, on the 1st of October, will mark the opening of the session 1860-61.

There is one word of advice which we offer, not only to students now commencing their studies, but also to those who are resuming their attendance for the second and third years. It is, early to acquire the habit of "making a note" of what they see. So numerous are the subjects for observation—so various are the features, so different the coloring, of the many things to be remembered and noted, that the most retentive mind could not retain one tithe of what passes before it without the aid of a note-book. It is not notes of lectures to which we now allude—they will be found useful; but the practice we advise is, to make a memorandum of what ever strikes the observer when in the wards in reference to cases under treatment; a note of the leading symptoms of a case; the treatment,—and chiefly the principle,—or "the reason why" such and such a plan of treatment or remedy is employed. As to what other things the student should note, the limits of this article do not permit us to refer to them; suffice it to say, that recording in a brief manner, the observations which fall from the lips of the physician or surgeon, explanatory of the case, will rapidly familiarize the student with those features of it which are most worthy of record and remembrance.

Let us endeavor to trace the progess of a young pupil, fired with the laudable ambition of distinguishing himself, and determined to merit, not only the approbation of teachers, the congratulations of friends, the affectionate greetings of parents, but the silent approval of his own conscience, often more difficult to satisfy. The first year's career finds him, with praiseworthy industry, a master of the first rudiments of anatomy; he has studied and learned the structure and uses of the skeleton; he has dissected part by part, and acquired a general knowledge of the visceral, muscular, vascular, and nervous systems. Physiology has explained to him the functions of the parts, and Chemistry has unfolded to him an outline of the powers and properties of matter; and the end of his first session finds him well placed in the list of meritorious candidates for the competitive examination for first year's students. He has visited the wards, and has familiarized himself with the kind of information he will gather there. The first year may be accepted as the test of his career. Habits of industry formed then are rarely, if ever, lost; they are retained, not only through the probationary period of his studentship, but they will grace with productive activity the remaining years of his life. Many parents, whose anxious fears naturally follow this early period of their son's career, may calm their anxiety with the consolation that a first year well spent in a medical school is assurance of no mean value of the favorable progress which their son will make afterwards. Those who have the largest experience in the training of youth for the medical profession will testify to the fact, that a first year's student who has done well—who has earned commendation for industry and attention, has rarely, if ever, been known to become infected with the idleness and dissipation formerly so characteristic of the medical student. The career of the diligent student thenceforth may be briefly stated; the second and third years find him equally studious, with enlarged views; and, impelled by the longing of daily-increasing appetite for scientific knowledge, he is soon placed foremost in the ranks of those most eager for instruction in the wards.

The physicians and surgeons are personally interested in selecting from the most intelligent and the most industrious their clinical clerks and dressers. These offices it should be the ambition, as well as the duty, of the student to obtain. The advantages they offer are very great; the more so in proportion to the experience and tact, as a clinical teacher, of the physician or surgeon whom he serves. But even under any hospital officer, the duties of clinical clerk or dresser afford opportunities for obtaining an insight into the symptoms of disease, the effects of treatment, and the general progress of a case, which no "going round" will ever impart.

We can here again, with pride and satisfaction, allude to the influence which this journal has exercised for the benefit of the student. In almost all the metropolitan and provincial hospitals such offices are now thrown open to competition by examination. Fees for these appointments are now the exception. The evil of their being paid for was enormous. They were obtainable only by favoritism and money. The humble, industrious, hard-working, but poor student, had no chance of holding them. Sons, nephews, cousins, or private pupils of those in office were alone selected. But all is changed now. Competitive examination decides the election; and the pupil, whose career we have sketched, and who has so promisingly laid the foundation for his future success in life, has now a better chance than the most favored by patronage or fortune. It is not likely that the duties of an office, for which there may have been several candidates, will be neglected by him who gains the appointment by examination. He will appreciate too highly the advantages which are before him to misuse them. The physician quickly finds that his case-books are efficiently kept, and is at once ready to acknowledge the superiority of the present system of selection over the past. Let the student for a moment reflect on the value of this introduction to bedside instruction. He learns not only how to get all the information needed from the patient, his history, his sensations, the state of his functions, but he imperceptibly learns how to get this with all gentleness, not as one asking idle and objectless questions, but as a true physician, sympathizing with his patient, and gathering information for his relief. Nor are these the only advantages of such an office. The first introductions of a young man to practice may influence his future success in no light degree. His duties as clinical clerk or dresser have endowed him with such practised acquaintance with the minor details of his duty to the sick, that confidence and trust are at once reposed in him; and his patient feels a security beyond that which his age would justify, had not early industry and experience endowed him with the prerogative of years.

Thus rapidly have we sketched and lightly touched on the chief benefits which diligence obtains, and the advantages which improved hospital management offers to the industrious and well-conducted. But our task would be but half complete were we to neglect to notice those who, with the will to win, are beaten in the race of competition, and either have no time to wait their turn, or fail altogether in getting placed sufficiently prominent to be entitled to a clerkship or dressership. All cannot gain these posts; but all can benefit in their degree by the extensive field of observation that a public hospital affords. There are always special cases worthy of note; there is always information to be gathered where the gleaner is zealous and active. Questions can always be asked, and instruction gained from the lips of the physician or surgeon. And here we are tempted to offer a few remarks on oral instruction. It has ever appeared to us that the method of teaching employed in medical schools is the best calculated to bring out the capability, learning, and experience of the teacher, as well as to adapt itself to the varying capacity of the student. This method is essentially oral; by, lectures, demonstrations, and illustrations. It is peculiarly adapted to the teaching of Medicine and Surgery. Let it be distinctly understood that by "lecture" we do not mean a mere reading of an essay—the dullest, the least efficient method of teaching, and totally incompatible with the transmission of practical information. Such lectures are at best but the collating the writings and opinions of others on a given subject, with an interpolation here and there of the lecturer's own views: such teaching is ineffective and without power. No teacher should be appointed or tolerated who cannot convey instruction extemporaneously and largely in the conversational style: addressing himself first to one auditor, then to another; and varying, perhaps, his illustrations or explanations as he feels that his language and terms are properly understood. This style of teaching begets that familiarity between teacher and disciple which is so essential to the successful transmission of scientific data, and their ready reception by the student. This method of imparting instruction generates a sense of that serious responsibility which the mere reader of a lecture avoids. Moreover, the teacher by demonstration and illustration identifies his own convictions with the matter he describes.

The tendency of this system is to beget a wholesome familiarity between teacher and disciple, which exercises a high moral influence over the student, and in its turn develops a well-defined feeling of respect which in numberless instances is known to last as long as life endures, and to surround even the memory of our early teacher with a lasting esteem. Many of us remember, even with almost filial respect and fondness, the qualities of those minds from which we gleaned the first principles of our science. The student, especially the diffident one, should be encouraged to identify himself with his teacher; to feel that he has a like interest in acquiring knowledge which the lecturer has in imparting it. To look up with respect to a lecturer whose experience entitles him to such esteem, can only be expected from those whose education has been largely benefited and made eminently practical by their instructor. The student, therefore, who cannot understand the principles of treatment in any individual case, should be encouraged to ask "the reason why." This encouragement to seek at the hands of the physician or surgeon explanations of rules of practice that may seem to the student's mind obscure, serves a twofold purpose: it accustoms the student to study the principles of treatment, and it secures him hereafter from those errors of practice which arise from mere routine. Let the student never hesitate to pursue this course, diffidently yet earnestly. A lecturer devoted to his subject, a clinical teacher devoted to his cases, is never more gratified than when such questions are put, nor more pleased than in making clear and intelligible all he says or does. Pertinent questions draw forth from the storehouse of knowledge and experience many a remark pregnant with instruction to young and eager minds; and he who flinches or shrinks from such questioning is little fitted for the post of a public instructor.

If these be the duties of the lecturer towards the student, those of the latter towards his teacher are not less well defined. They may be comprised in a few words: not with indifference to neglect the care and patience devoted to his instruction; not to chill by inattention the zeal with which a conscientious medical officer seeks to perform his duties to those who have placed themselves under his tuition. There is no gratification, perhaps, so pure as that of having imparted to the student some of the earnestness and love of his profession which a zealous teacher feels; and there is no conduct so calculated to lead to laxity and indifference to the progress of the student as carelessness or idleness on his part. The student, therefore, convinced of the reciprocal duties belonging to each, enters on and pursues his career of study with every advantage and prospect of success. And such feelings mutually entertained, there can never be any fear that the one will fail in devotion to the instruction of his pupil, or that the other will ever be negligent or inattentive to the maxims and teaching of his tutor.

It is no part of our duty, and still less our inclination, to point out to those who are now entering the Schools for the first time any one for their selection. But we conceive that it is not beyond our province to lay down some marks for the guidance of the youthful student or his guardians in seeking a place where his medical education shall be completed. The large endowed hospitals have some advantages over the smaller, which are counterbalanced in the latter by some which are equally valuable. In the former, more numerous cases enlarge the sphere of observation, but the number of students affords diminished chances for obtaining clerkships or dresserships. In the smaller hospitals, a more concentrated attention on fewer cases can be made, and there is a greater certainty of succeeding to the office of dresser or house-surgeon, which every diligent student should seek.

The principle of competitive selection is now generally recognised, and we advise the attention of the student to be directed to those hospitals where this practice is adopted in its largest and most comprehensive bearing. Where clinical clerks and dressers are selected by examination, and where the still more valuable but until lately closed appointments of house-physician and house-surgeon are open to competition without expense of any kind, there we conceive will be found the highest advantages.

To whatever School, then, the student may enter, it is evident that his success or failure must mainly depend upon himself. No advantages which an institution can confer,—no labor or exertion which his teacher may make,—will counterbalance inattention or idleness upon the part of the pupil. To succeed in a profession like that of Medicine, industry perseverance, and self-denial are essential. No man has ever attained to any eminence in our calling who has not devoted himself, heart and soul, to zealous and unwearied study. There is no "royal road" to distinction in our profession. The path to eminence is one of labor and difficulty; but it has its rewards, —rewards which exclusively belong to the practitioner of Medicine,—the capacity of conferring advantages, beyond that of any other profession, upon his suffering fellow-creatures. It is encouraging to those who are struggling with difficulties to know that the greatest amongst us attained eminence by their own courage and perseverance. The early career of Harvey, Jenner, Hunter, and a host of others who are our "household gods," was one of toil, anxiety, and disappointment; but they had their reward. It is not in the nature of things that such illustrious men should rise up every day amongst us; but every student who pursues the study of his profession with a due regard to its usefulness and importance will, undoubtedly, reap the fruits of his labor. Let, then, each youthful inquirer labor assiduously to fit himself for the proper exercise of the duties which appertain to the practitioner of Medicine. It is not at all necessary to success in life that he should be a "prizeman," or obtain certificates of honor. We do not undervalue these distinctions; but they are not to be regarded as the invariable tests of superiority. The real object of the student is to become a scientific practitioner. We have indicated in the preceding remarks how he is to obtain that enviable position:

not by unusual proficiency in any *one* department; not by devoting himself to the exclusive study of one branch of medical science; but by an accurate observation of the human body in all its conditions of health and disease. He must not lose sight of the great landmarks of Medicine by undue attention to microscopical or chemical phenomena. These may be added effectively to his more important studies; but the basis of all must ever be anatomy and clinical study. Fortunately for the present race of students, they have full opportunities, wherever they may be placed, of obtaining a practical knowledge of their profession. Fortified by this conviction, it rests with themselves to do honor to their calling, in whatever position they may be placed, resting assured that if they

"Spurn delights and live laborious days,"

they will not have made the sacrifice in vain.

We desire most earnestly to urge all students seriously to consider these manifold opportunities, and zealously and industriously to avail themselves of them. They are on the threshold of a profession which stands pre-eminent for the benevolent services it renders to mankind, irrespective of nation, country, or place. Its principles and actions are universal, are recognised alike by rich and poor, and are as acceptable to the crowned head as to the famishing pauper. They are applied with equal influence and advantage to every people from pole to pole. Such reflections must rouse the dullest and most lethargic conscientiously to fit themselves for a profession of such wide and universal utility, and so to employ the period of their studentship that they may afterwards exercise this noble and beneficent profession to the advantage of mankind, to the advance of true science, as well as to the glory of Him whose truly wonderful laws they seek to interpret.

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THE INDIAN SERVICE.

We perceive from the *Army and Navy Gazette*, that the Royal Commissioners have prepared a series of questions relative to the sanitary condition of the different European and native troops throughout India. The commanding officer, the engineer, and the medical officer of each station, will be required to give and sign concurrently answers to the questions soon to be submitted to them. The first section of inquiry relates to topography, and seeks to elicit the fullest information relative to the character and history of the station. The second section bears reference to "climate"; whilst the third refers to the sanitary condition of the post, embracing all the points usually included under this head. Under the fourth section, the health of the troops is considered. The fifth section embraces questions intended to elucidate the effects of total abstinence, temperance, and drunkenness upon the amount of sickness, mortality, and crime at the station. Under the next division comes an inquiry into diet; dress, accoutrements, and duties are included under the seventh section. Then follow instruction and recreation; whilst military prisons, and everything relating to them, come under section nine. The subject of field service, and all in connexion with the conduct of the line of march of troops, bivouacking, camping, billeting, each medically considered, are included in the tenth section. The next embraces the statistics of sickness and mortality; and the extensive and important topics of military hospitals, and the burial of the dead, bring the inquiry to a close by forming the concluding sections.

By the *Indian Lancet* we learn that great grumbling had been caused amongst some divisions of the troops by a late order of the Quartermaster-General, enforcing the destruction of what are termed "soldiers' pets." The order refers to three subjects: 1st, the removal of pictures, &c., from barrack-rooms; 2ndly, private lights are prohibited; and, 3rdly, all pet animals are to be removed out of the barrack-rooms and buildings adjoining. Sir Sydney Cotton in the Peshawur division, has in reference to the last point even increased the harshness of this irritating order by requiring "that all buildings be pulled down that have been built for their accomodation." We quite agree with our cotemporary, that a proper supervision, without an order of this sweeping character, would have answered the desired purpose. The observations of the editor of the *Indian Lancet* are so appropriate that we make no apology for reproducing them:—

> "The European soldier in India leads a dull, miserable life; and, instead of issuing orders likely to make it duller and more miserable, the governing powers should endeavor to render an Indian existence happier for those they desire to keep in the country, and this we believe to be the wish of the Government of India. If men prefer pictures to whitewash, as long as their rooms are kept tidy, why should they not have them? If soldiers desire to read, and Government will not furnish lamps, why should they not have their own, if proper care be taken of them? And if they are fond of pet animals, why should they not keep them, if the buildings built for their accommodation are clean, and removed some distance from the barracks? Gentlemen in authority should remember that, anatomically considered, soldiers are composed of much the same materials as themselves, and that 'humanity-mongers' in England may on Exeter Hall platforms ask 'why soldiers in India may not possess a picture, read a book by candlelight, or keep a pet dog?'"

With our *Indian Lancet* we receive a quaint-looking prospectus of the *Akbare, or Medical Jabahut Gazette*—a monthly publication in Oordoo. This new periodical is intended as a medium of communication between native doctors in Government employ and native hakims, for the improvement of medical and surgical knowledge, and the greater alleviation of the many diseases to which the millions of inhabitants of India are subject. We need scarcely say that we wish the *Akbare Jabahut* every success.

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THE RETIREMENT OF M. RICORD.

An event has lately taken place at Paris which calls for our immediate attention in two very distinct points of view. The event itself has been chronicled by our Paris correspondent in the present number of this journal, and in no less than the retirement of M. Ricord from the post he has occupied at the Venereal Hospital of Paris for the last twenty-five years.

Now this retirement brings before us the question of superannuation of physicians and surgeons of hospitals, as regulated in France. Our readers are aware that physicians are expected to retire at sixty-five, and surgeons at sixty. Is this wise? We have no hesitation in stating our conviction that this is a most wholesome regulation, the introduction of which amongst ourselves would be fraught with great advantages.

Of course it appears *primâ facie* that such retirement deprives the patients of the experience gathered by the medical officer through a series of years, and that such patients lose his services just at the time when the latter seem to be the most valuable. But experience is not all that is expected from the nosocomial office-holder; he must also have retained, as far as the physician is concerned, a clear head,—and, as regards the surgeon, the full command of his intellect, besides a good eye and a steady hand. That many physicians and surgeons who have attained the ages in question are still highly gifted in all these respects cannot be doubted for a moment; but these are rather the exception than the rule. And when we consider that the older such men become the more busy they are in private practice, we cannot but believe that they can very gracefully make room for successors, without endangering their rank, fame, or interest, and without prejudice to the suffering poor. Add to these arguments that a great many of the medical men who are now regarded as the heads of the profession have voluntarily relinquished their posts, coerced, in some degree, by private engagements, and hardly any voice will be found to defend the system of indefinite hospital service now in force amongst us.

This is one of the points of view in which we desire to speak of M. Ricord's retirement; the other refers to the man himself. The great syphilographer has not as yet been removed from the labors of his gigantic private practice, and much may still be expected of him; but he has relinquished the teaching of the young generation; he has given up that mighty lever by which he so eloquently has raised himself to fame; that lever which has made him a universal favorite, and spread his doctrines far and wide over the globe. Eloquent and persuasive language, a frank, open, and most conciliatory manner, have, however, not been the only means by which Ricord has succeeded in forming a school; he has had other merits, and these, in a historical sense, we are bound now to examine.

When Ricord found himself, in 1835, first entrusted with the post of surgeon to the Venereal Hospital of Paris, he observed great confusion and uncertainty in the theory and practice of the diseases specially brought before him in his wards. Pathological phenomena were numerous; but they were all, either by authors or his own colleagues, viewed in different lights, both as to origin, prognosis, and treatment. The existence of a virus was denied by some; gonorrhœa, chancre, and systemic symptoms were huddled together; incubation was admitted by some surgeons, and rejected by others; local symptoms were looked upon by one party as the *cause*, and by the other as the *consequence* of infection; the affections of the lymphatic glands were involved in great obscurity; the order of the phenomena of general infection was unsettled; the mechanism of hereditary syphilis was a matter of dispute; the ultimate consequences of the tainted organisms of parents were not investigated; and the treatment adopted was naturally of the most opposite kinds.

Out of all the theories which had been propounded, that of our own Hunter seemed to Ricord the nearest to truth; but, unswayed by the authority of that great name, he set to work, and subjected every one of Hunter's views to the test of experiment. Guided by the actual practical manner in which Hunter had attempted to solve the pathological problems presented by venereal diseases, Ricord had recourse to artificial inoculation. By means of this method of experimentation (which to him then appeared infallible), he succeeded in dispelling the chaotic confusion which had long prevailed. Struck by the results of the inoculation of the matter of gonorrhœa, chancre, and secondary ulcers, Ricord built up the doctrine which has been before the medical world for the last twenty-five years, and which has had an enormous influence on practice all over the globe.

The views promulgated by Ricord and his school were the results of experimentation and observation; they were not the children of fancy, or the refined deductions of subtle reasonings and hypotheses, but the *bonâ-fide* offspring of bed-side study and comparative experiments.

It is not, however, given to man to rejoice in faultless systems; Linnæus, Brown, Broussais, and many others, fully illustrate this assertion; and the school of Ricord has not escaped the common lot. The founder himself has had occasion to modify his doctrines, and time will probably work more changes in them than we now wot of. But these spots on a very bright sun should not make us forget the persevering labors, the indefatigable industry, the genius, in fact, which has presided over all Ricord's deeds. Many of the pathological laws which he has shown to exist in venereal diseases stand to this day unattacked; and the vast improvements which he has introduced in the therapeutics of these affections would alone be sufficient to secure for him the gratitude of mankind.

Let us, therefore, not allow him to retire from the scene of his triumphs without a word of regret from these islands; let him remain assured that the medical profession of Great Britain are fully alive to the services which he has rendered to science; and that, in rejoicing in the prosperity which surrounds him, they heartily wish that he may long enjoy the reward of his valuable labors.

Medical Annotations.

THE COSTS OF RAILWAY COLLISIONS.

It is very satisfactory, in one sense at least, to find the directors of railway companies referring regretfully to the heavy deductions from their profits by the verdicts of juries who have awarded compensation to those unfortunate persons who have suffered injury from railway accidents, more or less due to the parsimony of railway directors and the scantiness or neglect of their servants. It is painful indeed to calculate how great the suffering, and how profound the distress, for which these sums are supposed to compensate; and it is not altogether pleasant reading, to have to digest the grumbling statements of chairmen who rise to complain of the high value of human life, and the extraordinary tenderheartedness of juries in appraising fractures, injuries to the spine, amputated limbs, concussions of the brain, and partial or total conditions of paralysis. But it is impossible not to derive hope from the fact that the pecuniary aspect of this question is making itself acutely felt. Sidney Smith's prophecy is in course of being verified. The Great Northern Railway has, we believe, paid something like £14,000 this year as compensation for injuries; and now that the directors are beginning to find how very expensive is the amusement of wounding and maiming aristocratic and commercial passengers, it may be hoped that considerations of economy may induce them to increase the number of pointsmen and guards, to improve their system of signaling, and to provide more efficient inspection and more frequent renovation of their rolling stock—improvements which have been long and continuously urged as necessary for the saving of life, and which may be adopted in the end as the means of saving money. The lamentations and complaints of the chairman of the Great Northern Railway are both instructive and hopeful on this point. In addressing the shareholders, thus mulcted of £14,000—

> "He had no hesitation in saying that railway property was most scandalously treated by the law and the juries. A man possessed of £50,000 paid no more for his fare than a man of £100 a year; but the amount of compensation given was according to a man's income, and not according to what he had paid. The juries, too, assessed the damages in a most unfair way, for they give a man or woman a sum of money which would buy a certain amount of annuity, not for life, but for all time. If a man was injured at the age of thirty-five or forty, he could but live a short time and enjoy the income for a limited period. He thought that the law ought to be altered in this respect, and had reason to believe the judges were of opinion that in this matter railway property was too severely handled."

At the same time it is just to remember that railway companies are not unfrequently exposed to claims for injuries so grossly exaggerated, if not wholly fictitious, that the most jealous precautions, aided by the appliances of the law, are necessary for protection against fraud. The subject of compensation for injuries arising from railway accidents is so extensive and important as to have become almost a new branch of Forensic Medicine.

AN HOSPITAL DEFRAUDED.

The embezzlement of hospital funds is certainly one of the gravest offences of which any man can be guilty. It involves a treble breach of trust. It is a robbery upon the donors, the trustees, and the poor. Such an offence passes beyond the moral limits of a misdemeanor, although the law may not easily recognise distinctions based upon a moral principle. At the Liverpool Assizes, Robert Drew Anderson, an aged man, who had previously borne a character of high respectability, was charged with such a breach of his trust, at the Liverpool Northern Hospital. He was indicted for forging and uttering several receipts for money with intent to defraud the trustees. It is understood that the amounts embezzled are very large. He pleaded guilty to three indictments preferred against him. His solicitor called attention to the fact, that the forgeries were only committed to cover the embezzlements, and not as a primary offence, and that since his arrest the prisoner had done all in his power to make restitution. He threw himself entirely upon the clemency of the Court. The Judge properly remarked, that this was one of the worst forms of embezzlement; for here was a man entrusted with funds for a charitable purpose appropriating those funds to his own uses. The sentence was fifteen months' imprisonment.

If this case were solitary, it would call for only a passing word of reprehension. But there is one feature which requires attention. In the prisoner were combined the offices of vice-president, auditor, and collector: three appointments which are obviously incompatible. It might be expected that the public exposure made last year of the loose financial management of many of our great charities, and the numerous frauds then brought to light, as the result of careless auditing, and the delegation of the power of collecting and checking subscriptions collected into one hand would have prevented the continuance of a system which must invite fraud by facilitating its concealment. We trust that this additional example may serve a useful purpose in inducing governors and trustees to adopt a yet more careful mode of auditing their accounts and checking their receipts.

THE SUFFERINGS OF PAUPER LUNATICS.

The treatment of lunatics in workhouses is so cruel, ignorant, and neglectful, their conditions so oppressed, desolate, and often indecently filthy, that the Commissioners in Lunacy embodied the results of their 655 visits in a special supplement to their report, and breathed out, with the guarded indignation of men inditing a blue-book, complaints of as harsh, as ignorant, and as unsuitable a treatment as any eight thousand persons ever groaned under in a civilised country. We have already referred to some of the things which were seen in these visitations.

The first principle on which a workhouse is administered regards the economical sustenance of the merely indigent. Hence a reduced diet, task-labor, confinement within the narrow limits of the workhouse premises, and other stringent tests of the actual want of the applicants for admission are thought necessary. However necessary to meet the case of able-bodied paupers, such conditions are absolutely cruel and highly detrimental to the insane. They insure the persistence of the disease, and increase the mortality of the patients. It is owing to this primary unfitness of the union-house as an institution for the treatment of the insane, aided by individual tendencies to economy, neglect, anger, and tyranny in the irresponsible administration of an absolute power over witless and troublesome inmates, that the Commissioners have found so fertile a crop of vices and abuses in the government and care of pauper lunatics. The rulers of each workhouse are absolute in this also. They may govern, misgovern, starve, neglect, restrain, seclude, and punish their insane paupers as they please. Neither the Lunacy Commissioners, nor the Poor-law Board itself, it would appear, have any other power than to remonstrate. This would seem, in very many cases, to be a form of address which affords to the union authorities an exquisite pleasure at once to receive and to disregard. If they have a certain pleasure in working their will, it doubtless yields a new sensation of refined enjoyment to pursue that will in face of an indignant remonstrance.

So at one place, after three reports, complaining that "the evils arising from the detention of insane persons in a workhouse were made manifest to a frightful extent;" that "no less than one-third of the inmates are insane or idiotic; that many of them are dirty in their habits, and placed to sleep together, sometimes even in a perfect state of nudity; the bedding scanty, and dormitory saturated with urine;" yet in the last report, at the end of eighteen months, the reporter still finds the rooms overcrowded and ill-ventilated; prostitutes and imbeciles herded together; wet and dirty patients placed to sleep together in the same bed, some lying together naked through the night; quantities of wet clothing and bedding brought up from the washing-room, and hung to dry amongst the sick patients; refractory patients secluded in the dead-house, and nearly every other conceivable abuse in full bloom at this institution, planted in one of the wealthiest manufacturing districts in England. In no one respect are the workhouses suited for the reception of insane patients. The objections to their intermixture with the ordinary residents are obviously great, inasmuch as there is no way of complying with suggestions for their benefit without disturbing the general economy of the house; and separate lunatic wards the Commissioners have found yet more objectionable, for their visits show that "it is reserved for lunatic wards of this description, and now happily for them only, to continue to exhibit some portion of that disregard for humanity and decency which at one time was a prevailing characteristic of the treatment of lunacy." At Plymouth they seem to have found a notable example of such evils. In workhouses generally the attendants are unpaid paupers, or very ill-paid and inferior persons. No written records of treatment are kept to bear witness against them; no case-book, register, or record-book. If the food of the lunatics be stolen, as happened at the Bath Workhouse,—if chained by the leg for days, or bound down night and day to a bed, as was seen at Dewsbury, Bury, and Llanelly Workhouses,—this ill-treatment, this gross and cruel resort to mechanical coercion, which is alone a test of utter neglect or inadequate means of amelioration, is only discovered by accident, if indeed it be discovered at all. For a part of this inhumanity, this neglect, this deficient accommodation, this imperfect treatment, there is an easy remedy in legislation, which shall provide for the removal of the majority of the insane patients, and the adoption of stringent measures to prevent the admission of others. Meanwhile we trust by the force of a salutary and repeated publicity to effect some reformation.

ALGIERS FOR THE CONSUMPTIVE.

The French journals report that Dr. Pietrasanta who was entrusted some time ago with a mission to Algeria in order to study the influence of that climate in chronic pulmonary complaints, has now communicated the result of his inquiries to the Academy of Sciences. Dr. Pietrasanta commences by stating that the climate of the city of Algiers is a medium between those of the temperate and tropical zones. Its atmosphere is extremely pure and cloudless. Twilights are very short. The seasons differ but slightly from each other, the annual average temperature being 66½°. Nevertheless, great variations are suddenly experienced at times. The hygrometric state of the ambient air is moderate, and the average altitude of the barometer 762·32 millimetres (about 30 inches.) There are, moreover, certain periods of wind and rain, which are well determined. Regarding population, the increase is determined, first, by immigration (arrivals being always more numerous than departures); and then by a diminution of mortality, and an increase in the number of births. Wherever insalubrity exists in Algeria, it is generally removable by human ingenuity and industry. Pulmonary complaints, however, do exist at Algiers. Dr. Pietrasanta considers that they are chiefly owing, first, to a contempt of hygienic practices; and, secondly, to the influence of libertinism, which the natives have borrowed from the Europeans. The following six propositions convey the results of these investigations:—1. The climate of the city of Algiers is extremely advantageous to patients laboring under pulmonary affections. 2. Consumption exists at Algiers amongst immigrants as well as amongst natives; but it is much rarer than in France and on the coasts of the Mediterranean. 3. The increase of consumption amongst the natives, whether Arabs, Mussulmans, or negroes, is independent of any climatological cause. 4. The climate of Algiers is extremely favorable in cases of predispositions to be conquered, or symptoms to be removed, which constitute the first stage of phthisis. 5. Its beneficial influence may be questioned in the second stage of tuberculosis, especially when general symptoms predominate over local injuries. 6. It is fatal in the third stage as soon as disorganization appears.

STATISTICS OF IMBECILITY.

It is estimated that in England and Wales there are not fewer than 12,000 persons of all ages belonging to the imbecile class. Of these, 2500 may be regarded as suitable subjects for school training: provision exists for only 600. In Scotland, special inquiries have proved that there are about 3000 persons in the general class of imbeciles, and 600 of these are assumed to be of a youthful age and capable of improvement: provision exists for only 36. In Ireland there were, in 1851, 4906 imbeciles; for the educable portion of which no provision whatever exists. We have in England establishments at Red Hill and at Essex Hall, Colchester: the former with 306 inmates, and an annual expenditure of £16,000; and the latter with 30 inmates, and a revenue of £1700. At Bath, also, an institution has been in operation, on a limited scale, since 1846. In Scotland, an asylum for idiots has been established for some years at Baldovan, near Dundee. In Edinburgh, the Society for the Education of the Imbecile in Scotland has charged itself with the diffusion of information on this subject and the furtherance of the work. The present provision for these unfortunates is lamentably deficient, and contrasts unfavorably with the state of things abroad. Dr. Brodie, who is urging the case of the imbecile in the United Kingdom, points out that in Switzerland, France, Prussia, Austria, Bavaria, Piedmont, Denmark, and in six or more of the States of America, the State has charged itself with their care and treatment, and liberal provision has been made for their peculiar necessities.

THE DANCE OF DEATH.

The Hospital Beaujon, at Paris, contains now two patients,—the one suffering from fracture of both legs, and the other so bruised and injured internally that little hope is entertained of his recovery,—who received their injuries simultaneously while performing one of those horrible dances and *tours de force* on a tight rope, which procure some excitement to the public, and gain to the performers, at a risk of life, which this accident does but too fatally illustrate. A father and two sons were in the act of exhibiting "human pyramid performance" on a double tight rope suspended upwards of ninety yards from the ground. This familiar performance has lost all interest for other than children and street idlers when exhibited on *terra firma*. It certainly does not acquire additional grace or beauty when gone through on the perilous footing of a tight rope suspended high in the air; but it receives a vast accession of interest to the multitude by the frightful risk of life and limb which it involves. We greatly doubt whether this is a lawful interest, a legitimate spectacle, a just risk, or a moral means of gain. In this instance, one performer was killed on the spot, the second lamed and disabled for life, and the third lies still in mortal danger. It were a comparable spectacle that a man should take a deadly poison before a large audience, and, for a certain gain, take the chance of recovery by use of an antidote, or of suicide. The profits of such exhibitors are the remuneration afforded to them for taking the chances of suicide with fearful odds against them. For the skill, the boldness, and the fearless tread of the acrobat, may avail him nothing. His life is at the mercy of a strand of rope, of a gust of wind, of a shifting pole, and a thousand physical chances, to say nothing of possible cramps, vertigo, and the like uncontrollable bodily seizures. If we mistake not, such exhibitions have been forbidden by magisterial authority occasionally in different parts of England. Such a judicious exercise of authority is, however, the exception. We hope that, warned by the terrific disaster which we record, it may henceforth be the rule. It is but a few weeks since a female performer, dancing on a tight rope amid fireworks was fatally burnt by an ill-directed squib; and an accident, entailing the loss of a life and severe injury to two attendants, was recently recorded as due to the slipping of a pole, bringing down rope, performer, and supports upon the devoted heads of two groundlings below. It is not always easy to define the line which separates enterprises of skill and justifiable daring from those of sheer foolhardiness and intolerable risk to life. But there can be no doubt that such performances as those of the sufferers at the Hospital Beaujon belong clearly to the latter category, and should be sternly prohibited.

Reviews and Notices of Books.

On Asthma, its Pathology and Treatment. By Henry Hyde Salter. M.D., F.R.S., Assistant-Physician to Charing-cross Hospital. pp. 372. London; Churchill.

The best known writers hitherto upon "Asthma" have been such as have been martyrs to the complaint. Sir John Floyer, Dr. Bree, and Lefevre of the French marine, suffered much and wrote well. The author of the present volume is fitted for association with these eminent individuals; at least, we judge from the Preface that he personally knows "the horrors of asthma," and we may safely say that he writes well. There was ample room for a good treatise upon the disease in question, to be written by a scientific and practical physician, who should review our accumulated clinical experience by the light of modern physiology and pathology, and at the same time be enabled to add something derived from direct personal observation. The hiatus has been filled in a very satisfactory manner. No one who reads Dr. Salter's work can doubt for a moment that he is master of his subject. So far as science permits, a progression is here made, whether as regards the general clinical history, the pathology, or the treatment of this affection. We do not think anything further could be at present satisfactorily said. Independently of the merely professional merits of the book, however, we are bound to say that it is written in so fluent and natural a style as to render its perusal as pleasant as it is profitable. That the work will become popular there cannot be a doubt, and when we state that it has a right to take its stand side by side with Budd on the Liver, Brinton on the Stomach, Bird on Urinary Deposits, Fuller on Rheumatism, and Garrod on Gout, we award it a position to which it is in every way entitled.

For some time past the author has been laying before the profession, through the medium of different journals, the general views he has arrived at on the subject of asthma, and which form the more central ideas of this his substantive work. It may not be out of place, however, to briefly indicate here what are the leading principles which are once more affirmed. In the first place, Dr. Salter coincides with several well-known pathologists in maintaining that asthma is essentially a nervous disease, the phenomena of which depend upon a spastic contraction of the unstriped muscles of the bronchial tubes, and which contraction is of an excito-motory or reflex kind; that this is an idiopathic, uncomplicated spasmodic asthma existing in most cases, at first, unassociated with any necessary or essential anatomic lesion, but that, if it becomes established and repeated in the patient, then it has a direct tendency to disorganize. It hence results that asthma is constantly seen allied with prominent morbid structural alterations, such as changes of the bronchial tubes, of the lungs, of the heart, &c.; so that emphysema, for example, is not to be looked upon as the cause of asthma, but as the effect of it. The most obscure and difficult part of the subject is the *etiology* of the disease. The causes of it, however, must be regarded as of two kinds—viz., the causes of the paroxysms and the causes of the disease. The first are the immediate provocatives of the attacks, the second are the original and essential occasion of the asthmatic tendency. To seize the former is often an easy task; to point out the latter—that is to say what has originally rendered the individual asthmatic, what it is that has disposed him from time to time to fall into the asthmatic state on the occurrence of the exciting cause of the attacks—is altogether as difficult. The author steers "a middle course between those who say that asthma has at the root of it some organic disease within the chest, and those who deny that genuine spasmodic asthma ever depends on organic lung disease, and maintain that it is always a pure neurosis."—p. 134.

Dr. Salter affirms that "asthma never kills;" at least he has never seen a case in which a paroxysm proved fatal. When a patient dies from the contingencies of the disorder, he does so from the organic changes in the heart and lungs which have gradually progressed.

As regards the prognosis of the disease, an unfavorable inference must be drawn from the persistence of expectoration, or from the presence of chronic cough. Both these symptoms show that the lining membrane of the air passages is the seat of organic change:—

> "If the patient is young, the chest sound, the attacks short, the intervals long; if there is no permanent shortness of breath, no cough or expectoration; if the attacks are getting milder or rarer, and if the exciting cause is clear and such as may be obviated, then a favorable prognosis may be given... If the patient is old, the lungs damaged, the attacks frequent and severe, the breathing never quite free, coughing and spitting constant, the disease apparently gaining ground, and the exciting cause occult or irremediable, then, *quoad* all or any of these circumstance, there is no alternative but to give an unfavorable prognosis."—p. 279.

The treatment of asthma, like that of all paroxysmal diseases, presents two phases—viz., one that pertains to the treatment of the dyspnœal fits, and one that relates to the treatment of the patient in the intervals. The therapeia of the former consists in the employment of certain depressants, sedatives, and stimulants, and the inhalation of particular fumes and gases. That of the latter is chiefly hygienic, being composed mainly of dietetic and regimental procedures and climatorial elements. All the points here involved, and numerous related topics, are, as we have before implied, most efficiently and clearly worked out by Dr. Salter. Whilst we are of opinion that he somewhat overrates the *novelty* and *originality* of many of his leading principles, as also his illustrations, we willingly allow that he has so treated his subject as to have furnished the profession with such a *résumé* of the nature and management of of asthma as will place him amongst a high class of medical writers.

Procrustes ante portas. Why the Shoe Pinches. A Contribution to applied Anatomy. By HERMANN MEYER, M.D., Professor of Anatomy in the University of Zurich. Translated from the German by JOHN STIRLING CRAIG, L.R.C.P.E., &c. pp. 55. Edinburgh: Edmonston and Douglas.

THE author of this little tract is well known as having largely contributed to the recent rapid advance of anatomy and physiology, which is due to the employment of the more direct and refined modes of investigation. In his experiments upon the mechanism of walking, he was forcibly struck by the extremely bad way in which our "foot clothing" is constructed. His attention was further directed to this point from having frequent opportunity, as a teacher of anatomy, of observing the almost incredible deformities of the human foot, resulting from the pressure of the shoe. Professor Meyer afterwards wrote a paper, embodying his opinions upon the subject in question. He had been already preceded by Camper with his paper "On the Best Shoe," and by Sömmering with a treatise "On Stays." Camper's suggestions attracted considerable notice; but his plans found little or no encouragement, because they were so very impracticable, and, above all, because of the very clumsy form of shoe he recommended.

The subject treated by Sömmering concerned a comparatively limited class—viz., fashionable tight-lacing woman. But the shoe still pinches everybody, and so Dr. Meyer, whilst following the indications of anatomy and physiology, again draws attention to the bad way in which we are shod, and proposes a new form of shoe in sufficient unison with the claims of "appearance" to justify its adoption. The English sufferer from corns, bunions, and all the miseries resulting from tight and ill-shaped shoes, may thank Dr. Craig for thus introducing Professor Meyer's views to his notice. But we fear we must agree with the translator that the prevalent ideas as to what is elegant and proper in regard to the feet are so radically bad, and yet so pertinaciously clung to, that we can scarcely hope this promulgation of the proper shape of the shoe will have any sensible influence in reforming one of our most absurd and *cruel* fashions.

On the Invention of Stereoscopic Glasses for Single Pictures; with Preliminary Observations on the Stereoscope, and on the Physiology of Stereoscopic Vision. By T. Wharton Jones, F.R.S., Professor of Ophthalmic Medicine and Surgery in University College, &c. pp. 31. London: Churchill.

Is it possible to form lenses through which, when presented before both eyes, any *single* painting or picture may be seen with something of a real stereoscopic effect? After weighing well this question and after much trouble in carrying his theory into practice, the author is enabled to answer it in the affirmative, and even to give the names of the opticians who are willing to supply opera and field glasses with stereoscopic lenses for single pictures. He frankly tells us, nevertheless, that

> "The stereoscopic effect produced by the stereoscopic glasses is very slight when compared with that usually presented in the stereoscope. It is, however, to be remembered, that the effect of relief or *intaglio* observed in the stereoscope is usually much exaggerated—is not such as the landscape or other subject represented could, by any possibility, present in nature."

Still, as a scientific experiment, Mr. Jones's inquiry merits encouragement.

Ure's Dictionary of Arts, Manufactures, and Mines. New Edition. Edited by Robert Hunt, F.R.S., Keeper of Mining Records, &c. Parts X., XI., and XII. London: Longman and Co.

This useful compendium makes considerable progress towards its completion. The portions before us include subjects from "Macaroni" to "Printing." We may instance the following articles as receiving very able and ample illustration at the hands of their writers: "Manure," "Mercury," "Metallurgy," "Mineral Statistics," "Mining," "Mint," "Nutrition," "Oils," "Ores," "Paper Manufacture," and "Pottery."

Journal de la Physiologie de l'Homme et des Animaux. Publié sous la direction du Dr. Brown-Séquard. Tome III. No. XI. Juillet, 1860. Baillière, London and Paris.

In the present number will be found the conclusion of M. Dor's paper upon "Variations in the Refracting Power of the Eye," as also that of M. Chauveau's "Theory of the Effects of Electricity." Other articles of interest are included with the above, of which we may specially notice the paper of M. Ch. Martins upon the "Subjective Conditions Modifying the Sensation of Cold."

Correspondence.

"Audi alteram partem."

DR. WILLIAM BUDD'S VIEWS

RELATING TO THE

CONNEXION BETWEEN INTESTINAL ULCERATION AND THE ELIMINATION OF FEBRILE POISONS BY INTERNAL ERUPTIONS.

(LETTER FROM STAFF-SURGEON DR. RENNIE).

To the Editor of The Lancet.

Sir,—Referring to the very interesting and important observations on intestinal fever by Dr. W. Budd,[*] I shall feel obliged by your giving insertion to the following remarks, as the occurrences on which they are based tend materially to corroborate the views Dr. Budd has advanced regarding ulcerations in the intestines frequently being the result of eruptions, standing in the same relation to pre-existing morbid conditions of the blood as the eruption of small-pox does to the constitutional disturbance which precedes it:—

In the summer of 1852, when serving with the Royal Artillery in Hong Kong, my attention was first drawn to the relation existing between local disease and varieties in the modes of elimination of febrile poisons. The circumstances were the following:—A corps of gun Lascars, recruited from the Madras Army, and attached to the Royal Artillery in China, were suffering severely from an obscure and fatal form of disease, setting in with all the ordinary symptoms of fever, and speedily becoming complicated with ascites, bronchitis, and a swollen state of the joints, which latter symptom led to its being viewed by some as a species of rheumatic fever. As the men composing this corps enlist on the understanding that their religious scruples are to be respected, opportunities were not afforded for observing the post-mortem appearances. I myself did not believe in the rheumatic origin of the disease; but no satisfactory theory of its pathology occurred to me until, after watching with some care the progress of the ordinary intermittent and remittent fevers (with their intestinal complications) which prevailed extensively amongst the European soldiers on the island, I ascertained that so long as the men had the regular febrile attacks, terminating by diaphoresis, they were free from any affection of the bowels; but that so soon as the paroxysms of fever ceased to pass off by perspiration, they were, as a general rule, seized with diarrhœa, usually of a periodic form, standing in the same relation to the hot stage of the fever as the sweating did, and which eliminative action in the intestinal mucous membrane was, in the majority of instances, the precursor of the dysenteric symptoms which were so common in the chronic forms of the disease.

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[*] Vol. I. 1860, page 387.

The observation of these facts in connexion with tropical fever of the periodic type in European constitutions, enabled me to account for the obscure disease of the gun Lascars. I believe them to have been seized with the Hong Kong intermittent, and that after passing through the cold and the hot stages, instead of the attack terminating by profuse sweating, as in the case of Europeans in the earlier periods of the disease, the crisis by watery elimination occurred internally, accounting for the sudden invasion of the dropsy, which sometimes set in in the air tubes with a rapidity terminating in speedy suffocation. This view appears to me the more probable when the peculiarities of the skin of the natives of the East are borne in recollection.

Shortly after arriving at these conclusions, I embarked for England in medical charge of troops, and as most of the men had suffered from intermittent and remittent fevers during their service in China, instances were of frequent occurrence tending fully to corroborate the views I had formed in reference to the dependence of some forms of diarrhœa on the absence of the sweating stages in these diseases. One man, I recollect, was attacked every second night, between eleven and twelve o'clock, with rigors. followed by fever, terminating by violent purging. From his previous history, and the general character of the attack, no reasonable doubt could exist for viewing the watery diarrhœa to be otherwise than perspiration from a mucous surface, and I accordingly placed him under treatment as for common ague—namely, ten grains of quinine on the day after the seizure,—and succeeded in arresting the disease after two doses.

Amongst the invalids on board there were several men from the 59th Regt., laboring under chronic dysentery; the whole of them having suffered severely from fever in China. On inquiring carefully into the history of their cases, I found that, without exception, when first attacked, the crisis occurred by ordinary diaphoresis, but that after the disease had continued for some time the perspiration ceased, and they noticed their bowels become affected—commencing with intermittent attacks of diarrhœa, which gradually became remittent, and ultimately merged into the form of chronic dysentery for which they were invalided.

The facts as I have now given them were embodied by me in a series of "Observations on the Connexion between Internal Disease and Irregularities in the Modes of Termination of Fevers in general," which I submitted in a printed form to the Army and Ordnance Medical Departments in the early part of 1854; and I drew the following practical deductions from them,—namely, that the tendency of the fever as it then prevailed at Hong-Kong was to terminate by watery effusions, which in the first instance, as a general rule, took place from the skin, but that after a time it seemed as if the cutaneous surface became unable to perform the eliminative process, compelling nature to select the surface next best suited for its purpose, and which seemed to be the intestinal mucous membrane, the process at first going on from it with the same regularity as it did from the skin; this, however, was of short duration, as it appeared to me that when the termination by diarrhœa was once fairly established, the characteristics of the disease became less marked—the diarrhœa, formerly intermittent, gradually became remittent, and ceased to be preceded by the same amount of constitutional disturbance as formerly—sometimes by none at all; ultimately no remission could be noticed in the bowel complaint, and the characteristic form of chronic dysentery became fairly established; the lining membrane of the bowels apparently not being capable of carrying on the process of elimination for any length of time without becoming diseased; constant irritation probably producing inflammation, succeeded by ulceration. The decline of the febrile symptoms in proportion as the bowels became diseased seemed to me to admit of the following explanation: that the materies morbi of the fever was prevented attaining a bulk within the current of the circulation sufficient to produce the constitutional disturbance it did formerly, from the fact of its having a constant breach of surface—a sort of safety-valve, in fact—to ooze out at in the ulcerated intestines.

The views I have now given were originally formed by me in 1852; and while I believe them to be correct as applying to certain forms of intestinal ulceration occurring as sequelæ of fevers, from observations I have made since, I am satisfied that other and possibly graver forms of ulcerative action in the bowels originate in pustular eruptions similar to those which are supposed to be peculiar to the skin, having on several occasions found the intestines the seat of them. The cases I allude to occurred in the year 1854, when I was surgeon of the convict establishment in Western Australia. The prisoners at that time were suffering a good deal from dysentery, which occurred in a large number of instances metastatically with cutaneous eruptions and a very severe form of purulent opthalmia, which were also then very prevalent in the prison. The pathology of these diseases was entered into by me at considerable length in my report for the half-year ending the 31st December, 1854, and which has been published in the blue book on "Australian Transportation," bearing date June, 1856, at page 125 of which it will be found stated—

"Several forms of dysentery prevail, the type depending on the peculiar action established on the intestinal mucous surface. In some cases there is reason to suppose that the intestines become the seat of pustular and other eruptions similar to those prevailing on the skins of the prisoners; but in the most aggravated forms I believe the functions of the minute glands which abound on the inner surface of the intestines become arrested, their structure disorganized, and filled with a peculiar yellow secretion, differing in several respects from ordinary purulent matter. On examining the intestines in three fatal cases, I found them in this state; and in a fourth, they were studded with a copious pustular eruption, in every respect resembling one of the prevailing forms of skin disease."

In conclusion, as bearing essentially on the very important views relating to sewerage inculcated by Dr. Budd, the question appears to me fit to be asked, as to whether small-pox may not frequently occur, without its true character being recognized, inasmuch as I doubt if we are in a position to deny the possibility of all the constitutional symptoms of the disease being present, and still from individual idiosyncrasy or other peculiarity its local manifestations occur internally, as in the case of contagious eruptive fever cited by Dr. Budd, or in those of the tropical remittent and eruptive diseases instanced by me.

I am, Sir, your most obedient servant,

D. F. Rennie, M. D.,
Staff Surgeon.

Glasgow, 1860.

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OBSTETRIC STATISTICS.

To the Editor of The Lancet.

Sir,—The following are statistics of 4733 cases of midwifery attended by myself and partners during the last seventeen years and a half, carefully drawn up from our register of midwifery. If you deem them of sufficient importance to merit a place in your journal, I shall feel obliged by their insertion. You will observe that the numbers of still-born children and of instrumental deliveries are usually small.

1843.—Number of cases, 194—boys, 99; girls, 95. —Natural presentations, 169; breech, 4; feet, 3; still-born, 4; epileptic convulsions, 1; funis prolapsus, 1; twins, 1; monster. 1; forceps, 1; turning, 1; born on arrival, 14.

1844.—Number of cases, 201—boys, 111; girls, 90, —Natural presentations, 156; feet to pubis, 1; breech 4; feet, 4; face, 1; back, 1; shoulder, 2; side, 1; hand, 1; funis prolapsus, 1; twins, 2; monster, 1; hare-lip, 1; forceps, 2; craniotomy, 1; turning, 2; born on arrival, 24.

1845.—Number of cases, 243—boys, 123; girls, 120.—,Natural presentations, 203; breech, 1; feet, 8; elbow 2; hand, 1; still-born, 6; twins, 3; hydrocephalus, 1; hare-lip, 1; forceps, 1; turning, 2; born on arrival, 24.

1846.—Number of cases, 298—boys, 154; girls. 144.—Natural presentations, 266; breech, 3; feet, 8; still-born, 12; twins, 2; forceps, 5; born on arrival, 16.

1847.—Number of cases, 229—boys, 132; girls, 97.—Natural presentations, 205; face to pubis, 1; breech, 4; feet, 2; still-born, 10; epileptic convulsions, 1; twins, 1; forceps, 3; born on arrival, 13.

1848.—Number of cases, 266—boys, 143; girls, 123.—Natural presentations, 218; face to pubis, 5; breech, 6; feet, 1; elbow, 1; face, 1; ear, 2; still-born, 7; funis prolapsus, 1; partial placenta prævia 1; twins, 5; hydrocephalus, 1; forceps, 2; craniotomy, 1; turning, 1; born on arrival, 26.

1849.—Number of cases, 244—boys, 138; girls, 106.—Natural presentations, 201; face to pubis, 6; breech, 5; feet, 2; elbow, 1; face, 1; still-born, 6; placenta prævia, 1; twins, 7; forceps, 1; turning, 1; born on arrival, 25.

1850.—Number of cases, 302—boys, 163; girls, 139.—Natural presentations, 234; face to pubis, 4; breech, 10; feet, 7; hand, 2; still-born, 22; funis prolapsus, 2; partial placenta prævia, 1; twins, 5; forceps, 4; turning, 1; born on arrival, 37.

1851.—Number of cases, 285—boys, 158; girls, 127.—Natural presentations, 230; face to pubis, 3; breech, 7; feet, 3; face, 1; shoulder, 3; hand, 2; still-born, 9; partial placenta prævia, 1; triplets, 1; twins, 3; spinal bifida, 1; forceps, 1; turning, 4; born on arrival, 29.

1852.—Number of cases, 281—boys, 157; girls, 124.—Natural presentations, 240; face to pubis, 3; breech 5; feet, 3; arm, 1; shoulder, 1; hand, 1; still-born, 14; funis prolapsus, 1; placenta prævia, 1; twins, 2; turning, 2; born of arrival, 23.

1853.—Number of cases, 289—boys, 112; girls, 177.—Natural presentations, 243; face to pubis, 3; breech, 9; feet, 1; arm, 1; elbow, 1; shoulder 2; side, 1; hand, 1; still-born, 21; placenta prævia, 1; twins, 1; forceps, 5; turning, 5; born on arrival, 16.

1854.—Number of cases, 327—boys, 171: girls, 156.—Natural presentations, 284; face to pubis, 5; breech, 4; feet, 1; still-born, 13; epileptic convulsions, 1; partial placenta prævia, 1; placenta prævia, 4; twins, 6; forceps, 1; turning, 4; born on arrival, 22.

1855.—Number of cases, 272—boys, 164; girls, 108.—Natural presentations, 212; face to pubis, 5; breech, 6; feet, 4; elbow, 2; back, 2: still-born, 3; funis prolapsus, 2; partial placenta prævia, 1; twins, 5; turning, 7; born on arrival, 31.

1856.—Number of cases, 282—boys, 134; girls, 148.—Natural presentations, 229; face to pubis, 5; breech, 6; feet, 3; elbow, 1; still-born, 20; funis prolapsus, 2; partial placenta prævia, 1; twins, 5; forceps, 4; turning, 5; born on arrival, 26.

1857.—Number of cases, 301—boys, 154; girls, 147.—Natural presentations, 249; face to pubis, 2; breech, 6; feet, 1; arm, 1; elbow, 1; ear, 1; still-born, 16; funis prolapsus, 2; partial placenta prævia, 2; twins, 3; spina bifida, 1; forceps, 3; turning, 3; born on arrival, 29.

1858.—Number of cases, 264—boys, 140; girls, 124.—Natural presentations, 211; face to pubis, 2; breech, 6; feet, 2; knee, 2; face, 1; back, 1; ear, 1; still-born, 14; partial placenta prævia, 2; placenta prævia, 1; twins, 1; craniotomy, 1; turning, 4; hand, 2; born on arrival, 28.

1859.—Number of cases, 298—boys, 146; girls, 152.—Natural presentations, 244; face to pubis, 3; breech, 6; feet, 1; face, 1; ear, 1; still-born, 15; funis prolapsus, 1; partial placenta prævia, 1; twins, [illegible]; hare-lip, 1; forceps, 3; turning, 1; born on arrival, 36.

1860 (half-year).—Number of cases, 157—boys, 80; girls, 77.—Natural presentations, 124; breech, 4; still-born, 6; twins, 1; forceps, 3; turning, 3; born on arrival, 22.

Totals.—Number of cases, 4733—boys, 2469; girls, 2264.—Natural presentations, 3918; face to pubis, 48: breech, 96; feet, 54; arm, 3; elbow, 9; hand, 10; knee, 2; face, 6; back, 4; shoulder. 8; side, 2; ear, 5; still-born, 208; epileptic convulsions, 3; funis prolapsus, 13; partial placenta prævia, 11; placenta prævia, 8; triplets, 1; twins, 61; hydrocephalus, 2; monster, 2; spina bifida, 2; hare-lip, 3; forceps, 39; craniotomy, 3; turning, 46; born on arrival, 441.

I am, Sir, yours respectfully,
Richard Cross, M. D.

Scarborough, Sept., 1860.

To the Editor of The Lancet.

Sir,—The following cases are copied from the records of 5026 cases of midwifery attended by myself:—

Face presentations—7 cases: 5 born alive; 2 dead.

Face towards the pubes—20 cases; 14 born alive.

Hand with head—3 cases: 2 born alive; 1 dead.

Shoulder presentation—3 cases: all dead born. Version performed.

Hand and arm—23 cases: 11 dead born; 12 alive. Version performed in 21 cases. One child decomposed, and not requiring version; in the other, turning was impracticable. In the former case the mother was under the care of a midwife; she was semi-collapsed when I arrived, and died in the course of a few hours. One death to mother (delivered).

Breech cases—66 cases: 48 born alive; 18 dead. One death to mother, (delivered).

Prolapsus of funis—22 cases: 10 funis and head, 4 born alive, 6 dead; 1 funis hand and head, born dead; 2 funis and breech, both dead; 5 funis and feet, 1 alive, 4 dead; 4 funis and hand, all four alive.

Footling cases—62 cases: 33 children born alive; 29 dead.

Placenta prævia—9 cases: 6 females, did well; the remaining three were delivered, but died from subsequent exhaustion.

Forceps—32 cases: 19 born alive, 13 dead. All the mothers did well.

Craniotomy—14 cases: 1 face presentation; 3 funis and vertex (pulsation in funis having ceased); 1 convulsions; 9 vertex cases. Two of these females died soon after delivery, and a third lived five days. Three deaths to the mothers.

Puerperal convulsions—18 cases: 15 did well; 3 died.

Plurality of children—72 cases (two distinct membranous sacs in each case): 16 cases of distinct placentæ; 56 in which there was one large placenta. All the females did well.

Hydatids—1 case.

Acephaloid—2 cases.

Congenital encephalocele—1 case, dead born.

2 cases in which the children were converted into a saponaceous or adipocerous substance, and apparently about the sixth month (previously reported in The Lancet).

1 case, deficiency of one arm.

Imperforate anus—1 case.

Hare-lip and cleft palate—3 cases.

Spina bifida—3 cases.

2 children born with three incisor teeth.

1 case, os occipitis three parts deficient.

1 case, in which the whole of the frontal and part of the parietal bones were deficient.

1 case in which the hymen was unruptured. After much difficulty I succeeded in introducing my forefinger, and discovered the os uteri dilated, the head presenting naturally; a full dose of ergot quickly terminated the case. She did well.

I remain, Sir, yours, &c.,
T. T. Smart, L. R.C. Edin.

1860.

DR. CARSON'S MODE OF SLAUGHTERING CATTLE.

To the Editor of The Lancet.

Sir,—Will you allow me, through your valuable journal, to draw the attention of the medical profession to a subject which, in a physiological point of view, must be of great importance to medical practitioners, and, in the economy of life, a vast boon to the public?

About twenty years ago, my father, the late Dr. Carson, took out a patent for a new method of slaughtering animals, based upon the physiological doctrines promulgated by him in his "Enquiry," published in 1833. Shortly after the patent was acquired, my father fell into bad health, and, as great prejudice against the method existed, by the advice of my brother, who was then a rising young physician, although he quite approved of the principle, the patent was allowed to lapse, without his family deriving any advantage from it.

Being so thoroughly convinced of the superiority of the meat killed by this mode, I have occasionally, since my father's death, had sheep, calves, lambs, and pigs slain in this way, and for nearly two years my butcher has constantly killed these smaller animals. I have not allowed him to attempt the slaughter of oxen, for which indeed he has not suitable tackle; but his man now kills with the greatest facility the animals I have mentioned. Everyone who partakes of the meat admits its superiority in flavor, in tenderness, and juciness. It keeps longer than meat killed in the ordinary way, it cures admirably, and is without doubt more nutritious. A number of scientific men in London have tasted it, and they have all expressed to me their great approbation of it, but I am not at liberty at present to publish their names.

The first process in killing is by collapsion of the lungs, which can be done in from about twenty to thirty seconds, and immediately afterwards, to facilitate death, to destroy irritability by cutting the spinal cord. The animal dies immediately, and in the operation only a few drops of blood are lost. In dressing, the only blood which flows away is venous; it is as dark as pitch; it soon coagulates and becomes a solid mass, and is perfectly free from serosity. About one-half more of the blood, and all the finer juices, are retained by this process, than in animals slaughtered in the ordinary manner—in a sheep perhaps three pounds weight, and in an ox as much as twenty.

In seeing the butcher dress the animal, the inquiring and thinking physiologist will be particularly struck with the appearance of the bowels and viscera, the veins and arteries of which resemble red netted work, and which in the ordinary mode of slaughtering are perfectly blanched.

The operation, though exceedingly simple, requires a little practice, and if attempted by an unskilled person, may end in failure. My butcher suspends the animal by the fore feet, the carcase being quite off the ground; and the hind feet are fastened to a ring in the floor, to keep the animal steady. He then makes an incision into the chest with a scalpel on each side, between the fifth and sixth ribs, after which you hear the air distinctly rushing into the chest. But in order to make the collapse as complete as possible, I have made the man use large elastic enema bags with a valve. The operation with him is now perfectly successful, and he never makes a mistake.

I am not a medical man myself, and, although well acquainted with the physiological views of my late parent, I am not able to discuss this subject with the eminent physiologists of the present day, but of the superiority of this over the ordinary practice, I have not the least doubt.

I am, Sir, your obedient servant,
P. M. Carson.

Liverpool, September, 1860.

⁂ A leg of Cheviot mutton was sent to us by Mr. Carson, cut from a sheep which had been killed according to the method he has described. Although cooked in the ordinary way, it certainly was unusually good with regard to tenderness, flavor, and the large quantity of gravy which it afforded.—Ed. L.

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WHAT IS THE SIGNIFICATION OF THE HEART'S THROB?

(LETTER FROM MR. J. MACLISE.)

To the Editor of The Lancet.

Sir,—As Drs. Broadbent and Arnott,* in endeavoring to refute my views respecting the laws which govern circulation, have but repeated such facts and reasoning as are to be found in every Manual of Physiology, they cannot, I suppose, consider that, unacquainted with such facts, I have ventured heedlessly to propound a *new* doctrine. So far from this being the case, I would have them know that I am conversant with all that has been written and spoken on the subject; and that I still adhere, unshaken, to the belief that though knowing the effects, we are but imperfectly acquainted with their causation, and must remain so as long as we continue to reason from an *error* first committed, such as that of regarding systole as being the *sole* circulating force, and that of this the pectoral throb is the sign. Since I have been led to form this belief from a comparison of the phenomena, I am, of course, bound to adduce the facts in support of my opinion. This, indeed, in conversation held with some of the highest physiological authorities, I have already done to an extent sufficient to elicit their decision that not only are the circulating forces veiled in much obscurity, but that there remains to be revealed some great truth in physico-vital dynamics, which, when known, will set at rest, self-satisfied and for ever, this wearied and wearying spirit of controversy respecting the real signification of the heart's motionsand sounds

I would, then, suggest to Dr. Broadbent who notes my "glaring misapplication of physical laws and my blindness to the most obvious phenomena," that possibly, I am as well acquainted as he himself is with the structural difference between the vena cava and the tube of a pump; and that I can prove anatomically that though the vein, circumstanced as he may experiment with it (and he cannot, in elucidation of this question, otherwise circumstance it until he learns how to create a man), must collapse by atmospheric pressure, yet this event is provided against by certain conditions of connexion and relative position which render it capable of serving the use I assign to it,—namely, that of being a simple conduit or reservoir for the venous blood moving by ingestive force centrally when (and only when) the heart performs diastole. This force is physical, and the heart is but the passive instrument by which it operates. The principle is hydraulic, and may in the present case be termed "hæmadraulic." When I affirm that the heart cannot move diastolically without causing motion in the venous blood at the same time and upon this principle, this cause, as *vis a fronte*, may still appear fairly tenable, notwithstanding the fact and phenomenon observable as evidence of *vis a tergo* on binding the arm in a ligature. In operating upon an aneurism of one of the primary arteries at the root of the neck, what makes the surgeon so dread the consequence of puncturing the brachio-sephalic vein? The heart, in this event, ingests the air through the aperture by diastolic suction, and this is proof positive that it must exert the same force upon the blood for circulation.

I am, Sir, yours obediently,
Joseph Maclise, F.R.C.S.

To the Editor of The Lancet.

Sir.—I would recommend Mr. Maclise and Dr. Broadbent to read the elaborate physiological writings of the late Dr. Carson, of Liverpool, on Respiration, on the Motion of the Blood, on Animal Heat, Absorption, and Muscular Motion.

Dr. Carson says that "the general agents which are employed in the circulation of the blood, and which themselves constitute a part of the animal machine, are the lungs, the heart, the arteries and the veins. There are other agents which may be called general, but which do not belong peculiarly to the animal fabric; the chief of these are atmospherical pressure and gravity."

Dr. Carson further says "the heart acts in a twofold capacity. By contraction of the ventricles it propels the blood through the arteries, and by the dilatation of the auricles it *pumps* it from the veins. It is at the same time a forcing and a suction pump."

I would particularly refer Mr. Maclise and Dr. Broadbent to Dr. Carson's refutation of Dr. Wilson Philips' and Dr. Arnott's arguments, that the blood could not circulate through the veins through atmospheric pressure, or, in popular language, by suction, in consequence of the pliant nature of these vessels.

Dr. Carson, in considering this subject, says: "That my opinions should have gained so many adherents, appears to Dr. Arnott as a lamentable proof of the great deficiency of the medical education of the period in which we live; but I will venture to tell Dr. Arnott, and I cannot omit to tell him, though it may be accompanied with certainty of giving him alarm, that the number of these adherents is increasing, that it will increase from day to day and from year to year, and that the rapidity with which that increase will proceed will be in proportion to the extent in which the rising generation of physicians is educated in those sciences to which Dr. Arnott alludes, and in which he himself is so great a proficient."

I remain, Sir, yours, &c.,
P. M. C.

⁂ Here we think it desirable to suspend all merely controversial discussion upon this subject. If any new facts or observations of physiological interest can be advanced, we shall be happy to publish them.—Ed L.

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* Vide September No. page, 258.

POST-PARTUM HÆMORRHAGE.

To the Editor of The Lancet.

Sir,—I have read with, perhaps, more than ordinary interest, the various communications which have recently appeared in the columns of your journal, on the subject of the suppression of uterine hæmorrhage after delivery, by the injection of iced water into the cavity of the uterus, the application of ice, &c., inasmuch as I was the first to call the attention of the profession to the efficacy of injecting cold water in such cases, in a paper published by me in the year 1836, in the fourth volume of "Transactions of the Provincial Medical and Surgical Association." Having enjoyed for more than thirty years one of the largest midwifery practices in the Midland Counties, (from which, however I have now in great measure retired,) I have had abundant evidence since that period, both in my own practice and in that of my medical brethren, of confirming all that was advanced in that paper.

Ice is not to be had on all occasions, and especially when just wanted, nor is it to be procured even in large towns in the middle of the night; and in country practice it is quite out of the question, unless the accoucheur, knowing what he has to expect, takes care to be previously provided. In such cases, other remedial means, *used in anticipation*, are, perhaps, to be preferred.

The plan of Mr. J. Higginbottom, (to whom the profession is much indebted for very valuable practical information on other subjects,) of giving an ipecacuanha emetic in these cases, is entitled to every consideration. I have not unfrequently observed, and I have no doubt other obstetric practitioners are cognizant of the fact, that when flooding after delivery has prevailed to such an extent as to alarm the attendant, and awaken the apprehension of the medical man himself, a sudden fit of vomiting has stayed all further loss of blood, the contents of the stomach and those of the uterus having been almost synchronously poured out; the womb has at once contracted, and no further hæmorrhage has ensued. But after all, Sir, most of your readers will, I feel sure, subscribe to the truth of the good old adage, "Prevention is better than a cure." This remark would apply to those cases in which flooding has been known to occur in previous confinements. I allude to the timely exhibition of a dose of ergot. I have for years used it with great advantage in such cases, giving from thirty to forty grains of the powder in a little water, from five to ten minutes before the birth of the child. Although I am willing to admit the remedy has not invariably succeeded, I think with the American obstetrician, Dr. Meigs, "no woman who is known to have a tendency to flood dangerously after the birth of the child, should be left without its conservative influences," and my own experience has led me to the same conviction, "that the *late* administration of ergot for hæmorrhagic patients is salutary and needful." In confirmation of this opinoin, I would just observe that it once fell to my lot to attend three sisters in their confinement, in each of whom flooding to an alarming extent came on after delivery. In all subsequent confinements, recourse was had to the timely administration of secale cornutum; all tendency to hæmorrhage was obviated, and the cases did well. Some years after, one of the same ladies left Birmingham, and went to reside in the neighborhood of London. She became pregnant, fell into the hands of a timid and inexperienced practitioner, and fell a victim to post-partum hœmorrhage. It is a curious fact, that the mother of the above ladies well nigh met her death from flooding, after having been delivered by an eminent midwifery physician. This same hæmorrhagic tendency running through the females of a family has in several instances come under my observation.

Another remedy I have for some years employed in cases where I had been led to anticipate formidable hæmorrhage after delivery, is an invention of Mr. Walter Mappin, surgical instrument maker of Birmingham, and called by him, "The Improved Midwifery Compress;" it is, more properly speaking, a midwifery tourniquet. On the occasions in which I have employed the instrument, it has acted admirably. In two instances its utility was most marked, though used under very opposite circumstances. The one, a large fat woman, of a leuco-phlegmatic temperament, with, I believe, a flabby heart; the other, a little spare woman, of a highly nervous diathesis. In both cases a frightful hæmorrhage on previous occasions had succeeded the birth of the child, notwithstanding the use of a timely dose of ergot, placing their lives in the greatest peril. In the former case nothing suppressed the flow of blood but the injection of cold water; the other yielded before that remedy was resorted to. In their subsequent labours the tourniquet was loosely applied as soon as the pains commenced, and brought fairly into operation as soon as the child was born, and in both instances, as well as on similar occasions since, no more than the ordinary amount of blood was lost.

Some years back I was called to assist a friend in a case of post-partum hæmorrhage. The patient was a poor, feeble, little woman, and a large quantity of blood was expelled as soon as the child was born, after a long and hard labour. The hand was immediately placed on the mother's abdomen, but the uterus was found loose and flabby; the placenta was carefully and readily removed. Effort after effort was made to get the uterus to contract, by firmly grasping it externally, and by introducing the hand internally, and irritating the walls of the organ. Ergot was given, cold water poured from a height on the naked abdomen, and afterwards injected into the cavity; but all failing, including spontaneous vomiting, to produce contraction, the patient sank soon after I entered the room. In this case the poor woman had swallowed nearly a quart of French brandy, at intervals, the pulse responding feebly to each repeated wineglassful, but the rally was only for a moment.

I remain, Sir, your obedient servant,
Thomas Chavasse, F.R.C.S. (Hon.)

Wylde Green House, near Birmingham, 1860.

To the Editor of The Lancet.

Sir,—Your excellent journal has lately contained letters on the treatment of "Post-Partum Hæmorrhage," but none on its prevention. May I be permitted to offer the following experience, not as being anything fresh or original, but because it may have escaped the thoughts of many in the profession:—

Some ten years since I attended a woman in her third confinement. She had very severe, almost fatal, post-partum hæmorrhage, but rallied and did well; and she had the same thing, but not so severe, at each of her previous labours. At her subsequent confinements I applied pressure,—the hand of her friend,—as the child was being expelled, and sustained the same by tying something very tightly around her, before the placental expulsion, and she had no hæmorrhage.

From that time till this I have done the same thing in every case, and have not since then had a case of post-partum hæmorrhage. I think the same is recommended by Dr. J. Burns, of Glasgow.

I am, Sir, your obedient servant.

R. W. Lammiman, M.R.C.S.

St. George's-street East, 1860.

To the Editor of The Lancet.

Sir,—No complication attending on a case of midwifery can be more embarrassing to a junior practitioner than hæmorrhage after delivery; and the publication of papers or letters on the subject is an incalculable boon to those practising midwifery at the commencement of their professional career. To combat a case of this kind requires knowledge and presence of mind; the former, added to experience (if he has had practical advantages), being the foundation through which the young practitioner has the latter at command, and by it he can quickly devise the best means of checking the loss of blood. That many of the more common established rules are of no avail in particular cases must have come under the notice of most of us; and any suggestions suitable to these occurrences are valuable to every beginner.

Hæmorrhage is produced hrough the want of uterine contraction, and may follow a very precipitate labour, and result from the organ being exhausted through the strong and rapid contractions on the fœtus and placenta; or a slow and exhausting confinement may be terminated by the expulsion of the normal contents of the uterus, and no further contractile power be left to close the uterine sinuses, relaxation taking place and consequently hæmorrhage. We are not able to explain the reason why, at the expiration of a certain period, an action should be set up in the uterus causing it to contract on what at that time must be considered a foreign body; but we all, by experience, know that the uterus will contract, and that, if strength of constitution still remains, contraction will continue until all foreign substances are removed from it.

Two facts should be in the remembrance of every junior practitioner during a case of post-partum hæmorrhage,—viz., the causes and the result; the causes being exhaustion of the uterine fibres for continued contraction from loss of nervous force, or a want of sufficient stimulation to call their enfeebled powers into action; and the result being a patulous condition of the uterine sinuses allowing of either internal or external hæmorrhage (we discard hæmorrhage following rupture of the cervix.) The object of the medical attendant is to excite quick and complete contraction of the uterine parietes so as to close the open vessels, or to mechanically prevent further loss of blood until new vigor is established; and to stimulate the uterus many practices have been called into request, such as the use of ergot, putting a child to the breast, cold-water injections, and the introduction of the hand conjointly with external manipulation, &c. But even these have failed to rouse the organ, so exhausted from its long-continued struggles or precipitate action, and mechanical agencies are requisite to stay the loss of blood; and in this case the simple application of Dr. Slyman seems to answer every purpose. This consists of two large bladders connected together by a flexible tube; one bladder is filled with ice cold water, and the other introduced into the uterus; pressure is made on the full one, and the water being forced into the other, renders it a most efficient plug for the uterus, and at the same time stimulates it, not only by its presence as a foreign body, but also through the contact of the cold water contained in the bladder. The uterus being filled artificially, little or no bleeding can occur; and when contraction takes place, the water is forced into the external bladder as gradually as the action of the organ is excited. This simple contrivance having fulfilled its office, the abdominal bandage, over a pad, is tightened to prevent relaxation; and then stimulants may be cautiously administered internally to raise the debilitated system, whether resulting from loss of blood or caused by a long and exhausting labour.

I am, Sir, yours respectfully,

Wm. D. Slyman, M.R.C.S.

VERSION WITHOUT INSERTING THE HAND IN THE UTERUS.

To the Editor of The Lancet.

Sir,—I think the following case so fully confirms the value of the method of turning described by Dr. B. Hicks, that I beg its insertion in your journal.

Early on the morning of July 24th I was summoned by a midwife in this neighborhood to go over to Woking to see a young woman under her care, and who was in a dangerous state from flooding. I found the patient, a delicate person, aged twenty-eight, in labour with her fourth child, in a most critical condition; face and lips pallid; extremities cold; pulse 140, small, and tremulous. She had had only three slight pains, but had lost a large quantity of blood. I found the vagina filled with coagula; the os uteri dilated to the size of a crown-piece, and entirely blocked up by the placenta. On passing two fingers between the wall of the uterus and the placenta, I felt a cephalic presentation, the membranes being unruptured. Knowing that no time must be lost, I determined on trying the plan of version suggested by Dr. B. Hicks. With my two fingers I made steady pressure on the head, while, with my left hand placed on the fundus uteri, I bore down the nates by gentle impulsive pressure. The head at once receded, and in two or three minutes I felt a foot presenting. Rupturing the membranes, I seized it, and directly afterwards the other; and, with a little firm traction brought the breech down into the cervix. I now waited, and gave brandy and gruel. My patient said she had scarcely felt what I had done to her, and appeared more comfortable. In ten minutes there was a slight pain, when I delivered her of the child (still-born); the uterus contracted freely, and in five minutes I removed the placenta, no hæmorrhage following. The patient remained in a rather alarming condition for some hours, but, by the use of stimulants, &c., gradually rallied, and has since entirely recovered.

I believe that the patient was saved much distress and pain, and that the shock to the system was greatly diminished, by my not being obliged to pass my hand entirely into the uterus; and further, had I done so, I must have separated a larger portion of the attached placenta, whereby there would have been more hæmorrhage, which she could not have borne. To me it has been a most satisfactory case, and I think it bears strong testimony to the value of the method.

I am, Sir, your obedient servant,
H. SHIRLEY.

Ripley, Surrey, Nov. 1860.

HINTS FOR THE PREVENTION OF ACCIDENTAL POISONING.

To the Editor of THE LANCET.

SIR,—The consideration of the subject of poisoning by accident or mistake is revived every now and then, when a case occurs which illustrates the need of some precautionary measures. It is, however, soon forgotten, until another victim falls under the present system of dispensing and vending poisonous medicines.

The Act to Amend the Law relating to the Unlawful Administering of Poisons, passed by the Government in February last, supplies a great defect in our criminal law, and will no doubt do much to prevent the perpetration of such offences as that which was the immediate cause of its enactment; but it does nothing to affect the indiscriminate sale of poisons, and makes no attempt to provide against what are called "accidental poisonings." Former attempts at legislation on this matter have failed, because of the impracticability of the measures which have been proposed. The authors of such measures have constructed schedules of poisons from which more dangerous substances have been omitted than any included; and they have attempted to place restrictions on the sale of articles in such constant demand amongst artizans of all classes, as to make it utterly impossible to carry the law into effect. With the sale of those poisons in constant use amongst artists, mechanics, and others, we believe it to be as impossible to interfere as with the sale of lucifer matches, which are now the favourate instruments of suicide and murder in France and Germany. But the "accidental poisonings"—those cases in which a druggist sells a customer laudanum for tincture of rhubarb or black-draught, or in which a relative or nurse administers to a patient a poisonous external application instead of a mixture, or gives two tablespoonsfuls of some active medicine instead of a teaspoonful—these we believe to be easily preventible. The first step should be taken in the druggist's establishment. He might fairly be required to keep all poisonous matters in vessels of some peculiar construction.

But here occurs the question—How shall we decide on what are to be considered poisonous matters? The want of a satisfactory answer to this question led some of those who have attempted to legislate on the subject into some absurdities. They made an arbitrary selection of several articles which were well known to be poisonous, and directed these to be secluded in a "poison closet," leaving others perfectly free which were just as dangerous. They omitted to lay down any rule which would serve as a guide in deciding what ought and what ought not to be considered a poison. Now we believe it is perfectly easy to give such a definition as might serve for the basis of legislation—a definition which shall include all known substances, and any others which may be hereafter discovered and introduced into medicine. It is clear that such a definition can only be based on the dose. The line between danger and safety is sometimes very narrow, and doctors themselves differ about poisonous doses; but we believe we shall lay down a rule capable of universal application when we say that every liquid should be considered as poisonous the maximum dose of which for ordinary therapeutical purposes does not exceed one drachm, and every solid substance the maximum dose of which does not exceed five grains. All such liquids and solids vendors should keep in such vessels as would indicate the dangerous nature of their contents, and this, we believe, would effectually guard against one class of accidents. It is just as easy to provide against the others. Most external applications are dangerous if swallowed, and consequently these should be placed in bottles of a distinctive shape, which would prevent their being mistaken for medicines to be taken internally.

There is but one other source of danger to be guarded against, and that is, the possible administration of an overdose of some powerful medicine. This might be easily prevented by the use in such cases of bottles of the same peculiar construction as those in which it is proposed to keep poisons on the druggists' shelves; and we are of opinion that the bottles with contracted necks are well suited for both purposes, affording, as they are acknowledged to do, sufficient indication to dispenser, nurse, or patient, of the potent nature of the medicine.

If these precautions were adopted, in our opinion accidents could only happen from ignorance or criminal carelessness, for which individuals may be fairly made responsible; and there can be no doubt that a system founded on the principles we have laid down would most effectually prevent a class of poisonings which are unhappily too often a scandal to medical men and druggists, and a source of grief to their patients and customers.

We have not touched upon the question how chemists and apothecaries are to be brought to adopt the scheme proposed—whether it should be by Act of Parliament or otherwise; but we are strongly inclined to the belief that a simple recommendation emanating from either the Home Office or the Royal College of Physicians would be sufficient. The best and most respectable portion of the fraternity would immediately act upon it, and the rest would ultimately follow their example. A system of safeguards so recommended in the public behalf would unquestionably be insisted upon by the physic-taking public; and when once become an *established custom*, any neglect of or departure from its provisions would imply such an utter want of ordinary care and prudence as to be altogether without excuse and deserving the severest punishment.

In conclusion, perhaps you will allow us to make known to those parties who, in consequence of the allusion you were pleased to make to our newly-invented bottles, have addressed to us letters of inquiry on the subject, that, apart from the public advantage which we firmly believe would follow the general use of these vessels, we have no interest whatever in the matter. Anyone may get information, and purchase the bottles upon exactly the same terms as ourselves, by applying to Mr. Toogood, 37, Mount-street, or to Messrs. Maw, Aldersgate-street. To those who may entertain doubts as to the practicability of the plan we have proposed, we may say that it may be seen here in full operation, and we shall be pleased to receive a visit from all who may wish to satisfy themselves upon that point.

We are, Sir, your most obedient servants,
SAVORY & MOORE.

New Bond Street.

THE TREATMENT OF ACNE.

To the Editor of THE LANCET.

SIR,—Would some of your numerous readers kindly enlighten me on the treatment of that common but obstinate skin disease, acne, as I have tried many remedies both local and constitutional, but with no marked success.

I remain, Sir, yours truly,
September, 1860. L.S.A.

THE TREATMENT OF ACNE.

To the Editor of THE LANCET.

SIR,—I venture to give my opinion to your correspondent, "L.S.A.," who asks advice upon the subject of acne. I believe it is generally more troublesome and painful when the stomach contains *too* much acid; for I have found ten-grain doses of bicarbonate of potash three times a day in a tumbler of cold water give great relief to the sufferer, applying at the same time cream locally. I find it also desirable to attend to the liver and bowels, and for this purpose I give three grains of blue pill and seven grains of compound rhubarb pill at bed-time once or twice a week.

For further information upon the subject of acne, I would advise "L.S.A," to read Mr. Hardy's "Treatment of Acne," published in the French *Journal of Medicine* for August, 1860, Art. 5873, edited by H. Chaillou, M.D.

I am, Sir, yours truly,
GEORGE SELYN MORRIS, M.R.C.S.
Tottenham, 1860.

To the Editor of THE LANCET.

SIR,—In reply, to "L.S.A.," who states that he has tried various remedies, both local and constitutional, in the treatment of acne punctata with no marked success, I would beg to suggest his trying the administration of the following prescription, which I remember my late clinical teacher, Dr. Gull, used with much benefit to his out-patients at Guy's Hospital:—Sulphate of iron, one grain; sulphate of magnesia, one drachm; dilute sulphuric acid, fifteen minims; pimenta water, one ounce; three times a day. The local treatment consisting in squeezing out the secretion daily, and washing the skin well with Castile soap and warm water, and followed by friction with a dry towel. If there be any pustules, they may be lightly touched with nitric-oxyde of mercury ointment every night. Hoping these few remarks may prove useful to your correspondent,

I remain, Sir, yours truly,
JOHN CANDY, M.R.C.S.,
Birmingham, 1860.

POISONING BY ACONITE.

To the Editor of THE LANCET.

SIR,—I send you the following account of a case of poisoning by aconite which has lately occurred in this neighborhood. It may prove interesting to many of your readers, as forming a fresh instance of an error which has been committed more than once: I mean that of mistaking aconite-root for horse-radish. In the present case, about a pound of the root of aconitum napellus was cut into slices and mixed with a gallon of pickles. A young married woman, who partook of them the next day, was seized, within ten hours of the meal at which they were eaten, with violent spasms and severe pains, with pricking sensation in the limbs, back, and chest, difficulty of breathing, and partial loss of sight; the pulse was considerably lowered, and the skin cold and clammy. Chloric ether and ammonia were given in full doses, and in an hour or two the patient rallied. The cause of these symptoms was unexplained until the following day, when three other members of the family, (namely, the mother, sister, and brother,) within an hour of having again eaten some of the pickles, were attacked in a similar manner. The mother was only slightly affected, but the brother and sister, especially the latter, who had taken a large quantity of the vinegar, suffered much more severely. These two patients were made to walk about; emetics were freely administered, and large quantities of brandy, ammonia, and chloric ether were given at frequent intervals; mustard poultices were applied to the chest and back of the neck, and hot water bottles to the soles of the feet. Galvanism, by means of a Pulvermacher's chain, was also employed over the region of the heart, in the case of the sister, whose pulse was at one time imperceptible. Fully twelve hours elapsed before this patient could be pronounced out of danger. The symptoms were much the same as in the first case, but in a more aggravated form, opisthotonos and trismus being very marked. They are now all gradually recovering their usual health, though for some days they complained of great pain and tenderness in the region of the spine, together with loss of sleep and appetite.

Hoping that, from the rarity of similar cases, this rough sketch may be worthy of a place in your valuable columns,

I remain, Sir, yours obediently,
JOHN BARR BROWN, M.R.C.S.
Sunninghill, Berks, 1860.

REVACCINATION.

To the Editor of THE LANCET.

SIR,—During the last eighteen months I have performed the operation in the same spot—viz., "on the front of the right arm, about two inches above the elbow-joint," on 1144 adult men, and 15 adult women; and have never, in one instance, witnessed any of the catastrophes stated, nor, indeed, been obliged to do more than recommend that the individuals should be excused, for a few days, from their ordinary duties. An admission into hospital has never been requisite, notwithstanding that a great many of these soldiers were cut from the arms of their comrades.

A REGIMENTAL SURGEON.

⁂ There is evidence to show that revaccination *from* adults is objectionable.—ED. L.

OCCURRENCE OF SYPHILIS IN CHILDHOOD.

To the Editor of THE LANCET.

SIR,—Seeing in your impression the report of a case of "Well-marked Syphilis in a Female Child, aged ten years," I am induced to send you a somewhat similar case, which occurred two years ago in the Dorset County Hospital during my house-surgency:—

A girl, aged thirteen years, was admitted with ulceration and swelling of the labiæ (said to have been of four months' duration,) together with psoriasis and ulceration of the throat; the latter symptoms had not existed so long, by the mother's account, as the former. As the swelling decreased, the hymen was found to be quite intact. No cause was admitted for the disease either by the mother or child, who was small for her age, and not arrived at puberty.

I am, Sir, your obedient servant,
W. G. Bacot, M.R.C.S.

Blandford, Dorset, Nov. 1860.

A SUBSTITUTE FOR THE CATHETER.

To the Editor of The Lancet.

Sir,—Some two years ago I had under my care a man who had received a fracture of the spine. Inability to micturate was one of the symptoms, and I expected that I should in this case, as I had witnessed in some others, have to use the catheter very frequently. It occurred to me, however, that by pressing over the region of the bladder the urine might be discharged, and so it proved, for when any fluid collected in the bladder the patient was always relieved by gentle, equable pressure. He never required the use of the catheter, and, though he survived his accident about three months, no urine ever escaped except under pressure.

Your obedient servant,
J. Wearne, M.R.C.S.

Helston, Cornwell, Nov., 1860.

TREATMENT OF MENORRHAGIA.

To the Editor of The Lancet.

Sir,—In answer to your correspondent, "Obstetricus,"* I beg to say that I have found a combination of solution of ergot, tincture of sesquichloride of iron, of each fifteen minims; water, one ounce, every third hour, very useful; also ten or fifteen-grain doses of alum in solution every five or six hours; likewise four grains of the sulphate of bebeerine three or four times a day in a pill. But hygiene, where there is no organic lesion, has much to do with the cure of these cases.

Yours obediently,
Physic.

October, 1860.

New Inventions.

IN AID OF THE

PRACTICE OF MEDICINE AND SURGERY.

IMPROVED FLESH STRAPS, FLESH RUBBER, AND FLESH GLOVES, THE OXFORD WASHING PAD, TO BE USED WITH SOAP. Manufactured by Lawrence & Co., Islington.

These instruments are very beautifully constructed and are admirably calculated for effecting the object they are intended to accomplish. One of the improvements they display consists in the hair being brought perpendicularly to the surface, by which it is rendered not liable to abrade the skin. Judging from the specimens before us, they could not be more artistically made. They are of two qualities, one finer than the other, and therefore suited to the delicate skins of the fairer sex. In their application every external portion of the limbs and trunk may be brought under the action of the gloves and rubber. Next to pure air and wholesome food, brisk exercise is of all things, probably, most conducive to health; and when this is not available, then, probably, friction with the instruments before us is its best substitute. Even in the practice of bathing, we strongly suspect that a sound rubbing is far more conducive to the promotion of health and strength than the mere action of the water on the surface of the body.

These very useful and neatly constructed instruments are well entitled to the recommendation of our professional brethren.

PARISIAN MEDICAL INTELLIGENCE.

(FROM OUR SPECIAL CORRESPONDENT.

Amongst the various subjects bearing on medicine, introduced to the notice of the Academy of Sciences on Monday, the 10th inst., one of the most interesting perhaps at the present moment is a detailed account given by Signor Vella, of Turin, of certain experiments undertaken by him in connexion with the effects of woorara administered to animals after the ingestion of poisonous doses of strychnine. These researches, which seem to have been carefully and conscientiously prosecuted, go a long way to prove that these two drugs, strychnine and woorara, stand one to the other *almost* absolutely in the relative positions of poison and antidote. (The reserve implied by *almost* is necessary, as it will be seen that this neutralizing property possessed by the woorara can be relied on within certain limits only.) The author of the above communication informed the Academy that he was first led to administer woorara in the treatment of tetanus by the consideration of certain experiments by M. Claude Bernard, in which it was clearly established that the physiological effects of this poison on the animal economy were due to paralysis of the motor nerves. For several years past, therefore, Signor Vella has been occupied in investigating the question of the curability of tetanus by woorara. This special therapeutic action clinical observation certainly denies to this agent, and Signor Vella has of late given to his researches a somewhat different direction, and has undertaken ninety-seven fresh experiments, partly with a view to the possibility of rendering the ingestion of strychnine innocuous by subsequent injection into the blood of solutions containing woorara, partly with a view of ascertaining in what proportions and to what extent the two drugs administered *conjointly* could be taken without the poisonous effects of *either* being manifested. In the first class of investigations, then, the animals, generally dogs, were poisoned, or at least made to swallow a dose of strychnine known to be fatal to them under ordinary circumstances, and then small quantities of woorara were from time to time thrown into the jugular vein whenever tetanic symptoms showed themselves, until the toxical effects of the first agent were exhausted, and complete recovery of the animals took place. In t [illegible] cond category, the two poisons were mixed in certain determined proportions, and no effect whatever was produced, and the life of the animal was unaffected.

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* Nov No. page 460.

A specimen of each suffices to illustrate Signor Vella's mode of proceeding. In a first experiment, the solution of two-fifths of a grain of hydrochlorate of strychnine in six drachms of distilled water was injected into the stomach of a middle-sized dog fasting. with the effect of producing at the expiration of a quarter of an hour violent tetanic convulsions. A solution of woorara was then thrown into the jugular vein; this produced a temporary cessation of the muscular spasm. When the convulsions returned, the injection was resumed and continued at intervals until a dose of three-fifths of a grain of woorara, dissolved in half an ounce of water, had been taken into the circulation. The whole operation lasted three hours, and at its termination the dog was allowed to run about the laboratory, apparently quite well, and no return of the tetanic symptoms occurred subsequently. Three days were now allowed to elapse, and the same dose of strychnine was exhibited to the same animal, who was then left to his fate, and died sixteen minutes after its administration. In an experiment of the second class, into the jugular vein of a big dog is injected a mixture containing one-thirty-third of a grain of strychnine, and a quarter of a grain of woorara, dissolved in fifteen minims of water, and the operation is followed by no bad result whatever; but on a subsequent injection of the same dose of strychnine, not guarded by woorara, the animal is killed in the space of ten minutes. It has been proved by Signor Piria, a chemist at Turin, that on the mixing together of these two agents no new chemical combination takes place, nor is appreciable alteration noted, the two drugs preserving their individualities indefinitely—a fact which renders their *modus operandi* in the process of mutual neutralization all the more obscure, the natural conclusion at first sight being that their harmlessness when mixed was owing to the formation of a new and insoluble salt.

Did you ever hear of the *Bombyx processionarius?* If not, so much the better; for, according to M. Champouillon, it seems to be a very bad beast and a most disagreeable acquaintance. It is a caterpillar, wearing a yellow uniform (like a Neapolitan galley-slave), of Druidical tenets, for it lives on, and no doubt worships, the oak. And, as this naturalist observes, "Si avec une gaule très longue on démolit un nid de bombyx;" or, Anglicé, if you stir him up with a long pole, he vindictively projects to a distance, in the direction of the aggressor, a very fine powder of so irritating a nature as to cause a papular eruption on the skin, followed by swelling of the part, and general febrile disturbance, with occasional delirium. A patient seen by M. Champouillon, who had incautiously applied some leaves covered with portions of the nest of a bombyx to that use which it was formerly the special privilege of the *Grub*-street literature alone to fulfill, was in a high fever, with delirium, and presented on the skin of the neighborhood of the anus a papular eruption, with considerable œdema and tenderness of the surrounding parts. I conclude that this *backbiting* insect must be unknown in our forests. I do not remember any mention of this particular bombyx in Mr. White's account of the Selborne zoological productions. I may as well state that salt-and-water ablutions, and poultices of crushed parsley, are considered by M. Champouillon as being the best applications for removing the irritation produced by the noxious emanations of this *noli me tangere* of the insect world.

REGULATIONS ACTUALLY IN FORCE RELATIVE TO THE FRENCH MEDICAL DEGREE.

Before admission into the Faculty of Medicine, the student who aspires to the French degree must be prepared for his future medical career by preliminary literary and scientific studies. The title of "Doctor en Médecine" or "en Chirurgie" is obtainable only after the due fulfillment of certain conditions. These conditions are: the attainment of the two baccalaureat diplomas, the one in Letters, the other in Sciences; the accomplishment of a fixed number of registrations or inscriptions, as they are termed; and the undergoing of sundry examinations, the last of which includes the Thesis.

The *Grades*, or bachelor degrees, are then of two kinds. That in Letters is required to be obtained previously to the commencement of the regular medical curriculum; and the diploma attesting possession of this distinction has to be produced at the Faculty of Medicine before the first registration can be effected. The other diploma, that of Bachelor in Sciences, is required to be shown before the third inscription can be accepted. This last is a special diploma, and one only available for the medical career; whereas the degree in Letters is accepted by the other faculties, and none of its subjects are specially medical. The subjects of examination for the degree in Sciences, as required by the Faculty of Medicine, are Physics, Chemistry, and Natural History: the ordinary degree of Bachelor in Sciences includes, besides the above, Mathematics. Up to the date of Nov. 1st, 1861, students already in possession of this grade—namely, the ordinary degree—are, in virtue of a decree of August 23rd, 1858, admitted to register at the Faculty of Medicine without the production of the diploma of Bachelor in Letters.

Inscriptions or Registrations.—The requisite number of these for the degree of Doctor is sixteen. The first is to be effected at the office of the Faculty of Medicine in November (when the scholastic year commences), the second in January, the third in April, and the fourth in July, during the first fortnight in each month; and so on throughout the four years of "scholarité," as it is termed. On effecting his first registration, the student must be provided with his register of baptism; and if a foreigner, this document had better be attested by a magistrate in his usual place of residence, and be countersigned by the consul of his nation accredited at Paris. With regard to age, the candidates for either of the above-mentioned diplomas in Letters or Sciences must be at least sixteen years of age before they are permitted to undergo the necessary examinations; the Faculty of Medicine, therefore, does not reinvestigate the question further than by requiring, if the pupil be a minor, the parents' or guardians' assent to his commencing his studies.

In addition to each registration, the student is required to present himself at the office of the Faculty (*faire acte de présence*) once during the last fortnight of each quarter, under penalty of forfeiting that quarter's registration. The fee paid for each inscription is 30 francs.

Examinations.—At the end of each of the first three years of study, the aspirant to the Doctorate of Medicine or Surgery is required to undergo an examination:—

That of the first year consists of Physics, Chemistry, and Natural History, in their medical application; Elementary Human Anatomy—bones, joints, and muscles; Elementary Physiology.

That of the second year consists of Anatomy and Physiology.

That of the third year consists of Internal and External Pathology.

These annual examinations take place in the summer-time, during the last fortnight in July. The fee on each occasion is 30 fr.

No student can obtain the grade of Doctor unless he shall have attended, either in the capacity of out-door dresser, clinical clerk (externe), or as "élève stagiaire" (supernumerary), the service of an hospital. The hospital attendance becomes obligatory after the eighth registration; and at the ninth, tenth, eleventh, and twelfth, (that is, during a period of one year,) the pupil is required to produce a certificate proving compliance with this regulation, signed by the medical officers, and counter-signed by the director, of the hospital in which the practice has been attended.

In addition and subsequent to these three annual examinations, there are five others, termed "de fin d'études," or final examinations. The subjects of them are—

1. Anatomy, with dissections on the dead body; Physiology.
2. Internal and External Pathology, with operations.
3. Medical Natural History; Medical Physics; Organic Chemistry and Pharmacy.
4. Hygienic Medicine; Forensic Medicine; Materia Medica and Therapeutics.
5. Obstetrics; Clinical Medicine and Surgery;—and according to the quality of the degree desired by the candidate, so the examination is more specially on the one or other of the latter subjects.

These examinations can be undergone only at the expiration of the fourth year, and after all the rules affecting the sixteen inscriptions or registrations have been strictly complied with. The fee for each is 50 francs, with an extra 40 francs for the certificate of aptitude.

Thesis.—This consists in a printed dissertation on a subject selected by the candidate himself, which may be either medical or surgical, according to the quality of degree desired. The dissertation is to be defended and argued upon by the candidate—its author, and is criticized and commented on by a Professor specially appointed for its examination. After the successful defence of the thesis, the diploma is granted. The fees on the occasion are, for the thesis, 100 francs; for the diploma, 100 francs; and for the final certificate of aptitude, 40 francs. The total of the fees paid are consequently—sixteen inscriptions at 30 frs. each, 480 frs.; three annual examinations at 30 frs. each, 90 frs.; five final examinations at 50 frs. each, 250 frs.; five certificates of aptitude at 40 frs. each, 200 frs.; thesis, 100 frs.; certificate of aptitude, 40 frs.; diploma, 100 frs.—total 1260 frs.; or, in English money, £50 8*s*. 4*d*.

Hospital Appointments.—The out-dresserships and clinical clerkships are termed *externats;* and the in-door hospital offices, corresponding to our in-dresserships, house-surgeons, and resident physicians' appointments, are termed *internats*. They are obtained by public competition, and are open to all the students of the Faculty, foreigners as well as Frenchmen, who shall have complied with the requisite conditions. In the case of the former class of appointments, the candidate must have attained the age of eighteen; he must have been vaccinnated, be able to furnish a certificate of morality and good conduct, signed by a magistrate, and prove that he had effected at least one registration. The *externat* lasts for three years; the number of these appointments is, in the case of the Paris hospitals, limited to 150, and the successful candidate is obliged to accept the post assigned to him. The *internat*, which requires for its attainment, besides a severe examination, the having previously filled the junior office just mentioned, is limited in duration to two years, but is sometimes prolonged for an additional twelvemonth at the prayer of the office-holder; and, in the case of a gold medalist, this period of extension is increased to two years. A small salary is attached to the latter appointment: it is £16 for the first year, and £20 for the ensuing ones. Lodging is also afforded within the hospitals to the internes, and board during their period of active service.

A Doctor in Medicine who may wish to obtain the same degree in Surgery, or the Doctor in Surgery who wishes to acquire the same title in Medicine, is required to submit a second time to the fifth final examination, and to defend a second thesis on a surgical or medical subject. The fees for this new degree are—for the fifth examination, 50 frs.: for the certificate of aptitude, 40 frs.; for the thesis, 100 frs.; for the certificate of aptitude, 40 frs.; for the diploma, 100 frs.; total, 330 frs.

An Englishman, desirous of obtaining the right of practising in France will find that the *readiest* mode of so doing is to submit to the examinations and other regulations necessary for the acquisition of the title of "Officier de Santé." This diploma, with a good English degree, is fully worth the French Doctorate.

For the attainment of the diploma of Officier de Santé, the following are the rules to be observed:—twelve inscriptions, at three months' interval between each, are necessary; the passing of an examination in French, Latin and Greek, as regards both grammar and history; and three medical examinations, whereof one is in General Anatomy and the elements of Physiology, a second in internal and external Pathology and Obstetrics, and a third in Clinical Medicine and Surgery, Therapeutics, and Materia Medica; the whole ending with a written composition on a question drawn by lot out of a certain number previously decided on by a jury. The cost of this diploma is 840 frs., or less than £34. Unless the applicant for licence to practice here be able to establish, as it is technically termed, an equivalence of grade between his own diploma and that of the Faculty, (and this is hardly ever admitted now-a-days), the whole of the examinations exacted for the degree of Doctor, except the three annual ones will have to be undergone; and even this boon—for such it is considered—is only obtainable by interest with the Minister of Public Instruction, or accorded as a return for signal services rendered to the French nation. The granting of the "équivalence de grade" by special decree is so rare, that, so far as I can learn, only fourteen cases have occurred in which this has been allowed since the year 1815; and out of the fourteen only three (Dr. Verity, Dr. Crawford, and Mr. Chepmell) were Englishmen.

GARIBALDI'S ARMY.

(FROM OUR SPECIAL CORRESPONDENT.)

I SHOULD have written you an account at least of the battle of Reggio, but you can form no conception of the life in Garibaldi's camp. When he asked me to become the surgeon of his staff, he told me indeed, "My life is nomadic, but we shall try to make you comfortable;" but I found it rather worse than nomadic. It is complete wear and tear of the constitution; there is no breathing time at all. He sets out at any time of the night, on horseback or in carriage, as the case may require, in company with one or two officers who happen to be on the alert, leaving his staff and army behind; and the next day we hear that he gave battle to the enemy and took an important town, or that he disarmed 4000 Neapolitans; and we are left to shift for ourselves every one the the best way he can. In such a predicament did we find ourselves in the Palazzo Reale of Messina on the 20th ult. The General went, quite alone, in a small steamer to reconnoitre near the coast of Calabria. On his arrival there he found some tempting spot near Reggio to land an army. He effected the disembarkation of Biccio's division, which was at hand, and marched upon the town. On the morning of the 21st, when I heard that there was some engagement to take place at Reggio, I left in a small boat for the scene of action, in company with two staff officers and the General's private secretary, all dressed *en bourgeois*. We arrived in the very heat of the contest. One of the officers had just time to get his arm wounded. Garibaldi was in his glory, rushing in front of the Bersaglieras, waving his handkerchief, and animating them with shouts of "Viva l'Italia, avanti!" whilst shells and balls were flying like a hailstorm round him, which only tore his hat in two pieces. After that battle, he had 35 wounded and 12 killed. Immediately after the engagement the General called me in, and gave me orders to look after the wounded and the hospital accommodation. We obtained, or rather we took, the College, which is a large building with eight commodious halls, just as if intended for hospital wards. There were some cases which called for immediate relief; and amongst others one of contusion of the lumbar vertebræ. The patient was raging with agony, tearing the bedclothes and suffered excruciating pain on the slightest touch or movement. It was thought that some serious injury had been done to the spinal cord, or that there was effusion into its membranes; but after the exhibition of opium and extract of belladonna, two grains each, and the local application of the latter drug, he passed a quiet night, and I found him calm the following morning, though considerable tumefaction still existed at the site of injury. I always resort to belladonna, (after the example of my teacher, Prof. Trousseau,) in both medical and surgical cases, where the nervous system is implicated, and I have found it render me important services. We had only four cases of amputation the same morning, and one of disarticulation of the hip-joint.

There was also a case of gun-shot wound implicating the left knee-joint. The patient was a private gentleman belonging to the aristocracy of Reggio. The ball entered above the patella, injured slightly the head of the tibia, and then made its exit at the internal aspect of the leg, just about the point of insertion of the gracilis and semitendinosus. A consultation was held. Some insisted upon immediate removal of the limb, others upon temporizing. I gave the casting vote in favor of the latter, and suggested that, in case of an operation being ultimately necessary, resection of the knee-joint should be had recourse to. I have heard since my arrival here that the gentleman is going on favorably.

At the Villa St. Giovanni we had a few slightly wounded and two killed. In one a ball entered at the frontal region and made its exit at the occiput; skull fractured on both sides, cerebral substance protruding; cold, clammy perspirations; pupils dilated; stertorous breathing at first, then altogether abdominal. The functions of organic life continued from eight A.M. (the hour of the accident) until four P.M.

On Sept. 19th there was an important engagement near Santa Maria, between Eber's division and the Neapolitan army of Capua. We gained Cajazzo during that demonstration, but it cost us very dearly. We have about 120 wounded, of whom 80 were in the hospitals of Caserta and Santa Maria the first day after the battle; now there remain only 46. Four amputations have been performed—one arm, one hip, two legs. The most notable cases are: That of Baron Cozze, of Palermo, lieutenant of Turr's staff, who went to carry off a wounded soldier lying on the field, and whilst carrying him was struck by a piece of shell, which entered at the lower third of the left thigh behind, fracturing the femur about the middle, and making its exit rather below the inguinal region. He is going on favorably, and his limb may escape amputation, though the fracture is comminuted, and a piece of bone came away by the opening. There is one who had his left eye knocked out by a ball, which entered at the superior posterior angle of the neck, and came out at the internal angle of the eye, fracturing the os unguis and spinous process of the nasal bone. The humors escaped, and the stump of the eye was in a state of suppuration. There are broken jaws and other casualties of less moment.

On the 21st, Cajazzo was retaken by the Neapolitans, who left us no wounded, as it is said by eye-witnesses that they burned all our wounded, and committed some acts of cruelty upon our prisoners. When you read the reports in the newspapers about the Vandalism of Bomba's soldiers, you must bear in mind that here we never can believe what people say. There are the most ridiculous and contradictory stories in daily circulation, which no man of sense would ever listen to. A French lady, who yesterday returned from Capua, and who visited Captain Catabene, who took Cajazzo on the 19th, and who is now a prisoner with several others, assures me that they are *very well treated* by the Neapolitans.

However, I have seen some horrid cases of cruelty and cannibalism in the province of Avellino. I was sent there to take charge of about 100 wounded, who were reported to be without the assistance of a surgeon; but I found only a dozen of them alive, the rest having all been massacred by the Bourbon agents and hired assassins of the province. That was a sight which I shall never forget; but as I have reported the case elsewhere, I need only mention that all the patients were doing well, except an old m n, aged seventy-three, who had sustained a cut upon the scalp, gun-shot wound at the pectoral muscles, which did not penetrate into the thoracic cavity, and another gun-shot wound, penetrating the left shoulder-joint. I have, notwithstanding, given a favorable prognosis, and he is making rapid progress towards recovery.

Naples, September 28th, 1860.

RECRUITS NOT PASSED.—The surgeon-in-chief of the 10th regiment of artillery in France has been arrested on a charge of having accepted bribes from the families of recruits, in return for which he falsely certified that the young men were unfit for service. It is said there is proof of an intermediate agent having touched as much as 7000 fr. or 8000 fr. for frauds of this kind.

AN OPERATION UPON AN OPERATOR.—M. Stackler enjoyed great reputation at Mulhouse, in France as a cool and skilful operator, and also as the author of several talented medical works. M. Stackler, unfortunately, suffered from a fibrous tumour of the rectum, and underwent the operation for artificial anus, soon after which he died of consecutive peritonitis.

PRINTED AND PUBLISHED
BY JAMES HERALD, No. 24 ANN-ST., NEW YORK.

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